SOUTHERN CALIFORNIA ASSOCIATION OF MARINE INVERTEBRATE TAXONOMISTS

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Ventral papillae of *Sthenelais berkeleyi* Pettibone 1971. LACSD Survey K (January 1977) station 1D rep 1. Photo by L. Lovell, editing by L. Lovell and D. Ituarte.

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The SCAMIT newsletter is not deemed to be a valid publication for formal taxonomic purposes.

MAY 11 2009

This was a regular monthly SCAMIT meeting and President Larry Lovell open the meeting with announcements including a review of upcoming SCAMIT meetings, business of the organization, and other items of interest.

Before the details of the meeting are presented some basic information on the taxonomic database and its development is provided to update the membership. SCAMIT is developing an online taxonomic database, an easily accessible, comprehensive information source tool, for use by marine invertebrate taxonomists. This information tool is being built upon the recently updated SCAMIT species list, A Taxonomic Listing of Macro- and Megainvertebrates from Infaunal & Epibenthic Monitoring Programs in the Southern California Bight, Edition 5. The species list will be the backbone of the database links to a dynamic species page for each species in the listing. This dynamic species page would contain basic information such as author, synonyms, classification hierarchy, literature citations for the original description and other important publications, and historical depth/ distribution records. It would also include links to existing electronic resources on the web and links to the SCAMIT website taxonomic tools with keys, tables, voucher sheets, and the newsletters. A diagram showing the components considered for inclusion and comprehensive nature of the taxonomic database is attached to the newsletter.

UPCOMING MEETINGS

July 2010 - No meeting scheduled as of the publishing of this newsletter.

Aug/Sept/Oct 2010 - not yet scheduled but will most likely involve QA/QC for the B'08 samples.

For public agencies and environmental businesses with taxonomic labs, the taxonomic database is an important tool for existing trained taxonomic personnel allowing them electronic access to information previously contained on paper in files and cabinets. It is especially important for the ongoing and future taxonomic training programs involving new taxonomists or those being trained in secondary taxonomic groups.

The Taxonomic Database group meets as necessary to review and discuss progress on specific goals since the last meeting. We also discuss direction and prioritization of future tasks as they relate to achieving our larger goal in a logical stepwise manner. The group is composed of representatives from every major POTW in Southern California (CSDLAC, City of LA, OCSD, City of San Diego), SCCWRP, and a database consultant. These POTWs all perform benthic studies that require invertebrate taxonomy and recognize the utility and need for an online taxonomic database that would bring together existing resources currently scattered in hardcopy format in various locations within a laboratory. Participation by Deb Paul from Morphbank, an image repository project at Florida State University, is necessary because of the planned database linkage to images stored at Morphbank.

The meeting started with presentations and discussion on progress towards a prototype version of the taxonomic database planned for release this fall. Key components are the Access version of the Ed 5 species list which serves as the backbone of the database, a dynamic species page containing basic taxonomic information and defined areas for links to other sources of information, active links to the SCAMIT website for taxonomic information from newsletters and voucher sheets, links to SCAMIT images at Morphbank, a list of outside links to other information websites (i.e. WoRMS, ITIS, uBio, Species 2000, EOL).

Key steps needing completion include finalization of the Access version of the Ed 5 species list, posting of scanned past issues of newsletters and voucher sheets, and a final decision on the design of the dynamic species page. The database tools planned for the future will be prioritized and added, as those data and other information are made available and developed. SCAMIT members will form taxonomic working groups to approve updates and input new information.

There was discussion on the new Morphbank grant to use the software, *Specify*, a specimen collections management program developed at the University of Kansas several years ago to submit metadata associated with images for submittal to Morphbank. Deb Paul suggested that SCAMIT provide a test case to Morphbank for the grant project. This test case would most likely be centered around one smaller taxa group on which SCAMIT has already collected information. It would just need to be organized and possibly restructured for acceptance by Morphbank and/or *Specify*.

The group decided that any additional documentation in support of SCAMIT provisional species should be a priority. Additionally we should move forward on preparing images for submittal to Morphbank and prepare a bulk spreadsheet submittal with a target date of late summer. It was decided that the group should meet again in August to review progress and decide the next set of objectives.

On the following Friday, there was a one-hour conference call between database group members Larry Lovell and Cheryl Brantley (CSDLA), Dawn Olson and Wendy Storms (CSD), Katja Seltmann and Deb Paul, to review Monday's discussion. Additional thoughts and information gathered regarding the planned tasks since the Monday meeting allowed further refinement of the timelines for immediate expectations and goals of the group.

26 MAY 2009

President Larry Lovell opened the meeting with announcements including upcoming SCAMIT meetings and other meetings of interest to members.

Scheduled SCAMIT meetings are - echinoderms 101 training workshop June 8 at CSD; photo editing workshop July 13 at CSD; cirratulid polychaetes August 17 at Hyperion; terebellid polychaetes September 14 at NHMLAC; and *Tellina*, *Nuculana*, *Boreotrophon* mollusks October 19 at OCSD. Other meetings of interest include the upcoming SCAS annual meeting May 29-30 at Marymount College (SCAMIT membership/information table on the 29th), the WSM meeting June 23-27 to be held at CSU Fullerton, and the International Nemertean Conference hosted by UCSB and SBMNH in Santa Barbara June 28-July 3.

Business of the organization was discussed next. Larry announced that Katja Seltmann has agreed to assist webmaster, Jay Shrake, with routine changes and uploads to the website. This is welcome news as we have been without a functioning website for several months. May is membership

month. All members are asked to rejoin and send their annual membership fee to Cheryl Brantley promptly. Information on levels of membership can be found at the website. SCAMIT is planning to have a 2010 calendar. Members are asked to submit images for consideration until October 2009. Last year's calendar was a success and received attention from biologists outside SCAMIT.

Following announcements and business, there was discussion on taxonomic training and SCAMIT's roll. There has been interest in SCAMIT offering lower level taxonomic training meetings, such as the Bivalve 101 workshop last year by Paul Valentich-Scott and the upcoming Echinodermata 101 workshop by Megan Lilly. Weston Solutions has offered to host such workshops. OCSD is developing a taxonomic lab with personnel in need of training and the City of San Diego will shortly have new personnel that need training. Other labs will be facing retirement of key taxonomic personnel in the coming years and have similar training needs. Larry has been discussing this with Vice-President Leslie Harris who is in charge of meetings. She agrees that this need should be addressed and that a series of training workshops across phyla should be organized. Those more senior members with many years of experience will be approached about leading such workshops in the future. It was, however, noted by Larry that Bight '08 taxonomy meetings and QA resolution/reconciliation meetings would be priority topics until the fall of 2010.

We then began discussion on the topic group of the day, the family Sigalionidae, which is one of the scale-worm families. They are carnivorous (with large jaws) and actively burrow in the sediments. There are four genera listed in the SCAMIT Ed 5 species list; *Pelogenia*, *Sigalion*, *Sthenelais*, and *Sthenelanella*. *Pelogenia fimbriata* (Hartman 1969) is found in shallow white or coral sand sediments. *Sigalion spinosus* (Hartman 1939) occurs in shallow shelf depths and is recognized by the small antennae on the prostomium and the bipinnately branched filaments on the outer margin of the elytra. *Sthenelanella uniformis* Moore 1910 is easily recognized by the long threadlike iridescent notosetae produced by the notopodial spinning glands and mottled elytra. *Sthenelais* has multiple species represented in the Ed 5 species list and was the topic group of the day.

There are four species of *Sthenelais* on the Ed 5 list reported from Southern California; *Sthenelais berkeleyi* Pettibone 1957, *Sthenelais fusca* Johnson 1897, *Sthenelais tertiaglabra* Moore 1910, and *Sthenelais verruculosa* Johnson 1897. *Sthenelais verruculosa* lacks short-bladed falcigers found on the other three species and is typically collected in shallower depths. *Sthenelais berkeleyi* has a ventrum with obvious large dense papillae (see NL cover photo). The other species have very small papillae that are hard to see except under high magnification. *Sthenelais fusca* has 5 –7 more stout compound neurosetae. *Sthenelais tertiaglabra* has 1-2 stout neurosetae. These stout neurosetae are best seen in median segments.

Larry showed images of *Sthenelais* with emphasis on the stout neurosetae. He found that the number of stout setae was more developed and consistent in the middle segments of the body and showed images of parapodia from different setiger counts along the body. Examination of early anterior segments for stout neurosetae and their counts cannot be relied upon. Ron commented that the structural lines at the point of articulation on the stout neurosetae of *Sthenelais tertiaglabra* are more tapered or rounded verses a more angular appearance for *Sthenelais fusca*. Images of lateral antennae dissections and elytral microtubercles were also shown. The microtubercles of the elytra are all very similar between species and are not useful in discriminating local species.

Larry commented that the *Sthenelais* species reported in Southern California by POTW's are not uniformly distributed. There are differences in the sediment type or other conditions of the sampling stations that drive what species occur. LACSD regularly reports *Sthenelais fusca*, but it is absent or rare at other POTWs. He also noted that some characters mentioned in the literature are not reliable. The degree and color of elytral pigmentation cannot be relied upon to discriminate between *Sthenelais fusca* and *Sthenelais tertiaglabra*. Illustrations of head regions are complicated and difficult to interpret. The terms lateral ctenidia and lateral antennae have been confused and inconsistently applied in the literature. The best review of the family and key to the local species can be found in Blake (1995). Voucher sheets for *Sthenelais tertiaglabra* and *Sthenelanella uniformis* can be found in the taxonomic toolbox on the SCAMIT website. Larry plans to produce additional voucher sheets of other reported species and post *Sthenelais* species images at Morphbank.

8 JUNE 2009

Attendance: Ron Velarde, Megan Lilly, Constance Gramlich, Lisa Gilbane, Robin Gartman, Cheryl Brantley, Larry Lovell, Wendy Enright, Maricarmen Necoechea, Christina Thomas, Laura Terriquez.

The meeting was opened by President Larry Lovell. He started with upcoming meeting announcements: July 13th will be a digital photo editing workshop at CSD, led by Dan Ituarte and Nick Haring; August 17th will be on miscellaneous cirratulid genera at Hyperion (Ed. note - this was later changed); Sept 14th will be Terebellids at LACNHM; Oct 19th we will look at *Tellina* and *Nuculana* at OCSD.
Non-SCAMIT meetings of interest were as follows: The AMS/WSM meetings will be June 23-27 at CSU Fullerton, contact Kelvin Barwick for more information. The 7th International Nemertean conference will be held June 29-July 3 in Santa Barbara, CA. The 10th International Polychaete Conference will be held in the summer of 2010 in Lecce, Italy. The CIAC meetings will be held in Vigo, Spain in September of this year.

We were sad to hear that our webmaster, Jay Shrake, has stepped down after many years of service to SCAMIT. SCAMIT will be seeking a replacement webmaster in the immediate future. In the interim we luckily have an assistant web master, Katja Seltmann, who will be dealing with uploading items, changing dates, etc. A big thanks to Katja for helping us out.

May was membership month, please rejoin and send your form with payment to Cheryl promptly. Larry wrapped up the business portion of the meeting by making another call for 2010 SCAMIT calendar images.

With that it was time for the presentation of the day, Echinodermata 101 by Megan Lilly, CSD. In the morning each of the five Classes were discussed with an overview of which major taxonomic characters are used in the identification of each group (caveat - the taxonomic characters of importance that are listed for each Class are those that are meaningful from a morphology-based, functional taxonomy perspective; they are not meant to imply any order of systematic or phylogenetic significance; they are also not exhaustive). She also touched upon how to specifically identify some of the more common species seen in our sampling programs, but tried to stay general as the workshop was supposed to be an overview of the five Classes, not a detailed study of any one group. Additionally a list of the more commonly used literature was distributed.

The Class Crinoidea was dealt with initially and only briefly touched upon, as to date the Southern California monitoring agencies have only sampled one species, *Florometra serratissima*. But, a cautionary note was given that there is always the possibility of seeing the more northern species, *F. asperrima,* or even one of the deeper water species, if we continue to move down the slope in our regional sampling surveys. See Clark, A.H. and A.M. Clark 1967 for more information on this topic.

Second up was Asteroidea. Major characters used for taxonomic identification in this Class are: gestalt; arm spines; jaw structure - marginal/apical spines; other calcareous plates and their associated spines; pedicellaria; and paxillae, to name a few. To find good diagrams detailing these structures (which can get confusing), see Lambert, 2000. Images of local asteroid species were used to high-light and explain some of the characters discussed above. Different genera were compared and contrasted to reveal character differences.

Third in line were the Echinoidea. Primary focus was on the heart urchins (Spatangoida) as they are the predominant group sampled. A few major taxonomic characters are as follows: test shape; spine morphology; petaloid shape and proportions; presence/absence of fascioles – internal, peripetalous and subanal; presence/absence of an anterior ambulacral notch. Again, images of local species were shown to display various character states. The Order Clypeasteroida was only given a single slide, as we only sample one species in our offshore efforts, which is *Dendraster terminalis*. However, *D. excentricus* is quite common in shallower habitats and examples of that species were available for examination. The third species of concern is *D. vizcainoensis* which has yet to be sampled, but is a possibility. See Mooi 1997 for a thorough discussion of *Dendraster* spp.

Ophiuroidea was covered next and was probably the Class on which the most time was spent as they are often a majority component of many benthic samples. Some of the primary characters used (but definitely not all) in identification are: oral papillae/teeth; arm spines, arm plates, tentacle scales, pigment (with caution), disc scales/ornamentation. More specific detail was given with regards to identifying down to a species level for some of the commonly sampled ophiuroids and images of common species were used to show examples of various morphological characters. A warning was given about the fact that oral papillae patterns change with growth, and many keys are based on this character, so caution needs to be taken with juveniles. Additionally, pigment can be a tenuous character as it often fades quickly once the animals are preserved, and it is Megan's personal belief, that it can be influenced by habitat/diet as she has seen evidence for this while doing consulting work from various areas of the NE Pacific. A good place for generalized illustrations of ophuiroid morphology and terminology is the Ophiuroid chapter by G. Hendler in the MMS Taxonomic Atlas, Volume 14.

Last, but certainly not least, were the Holothuroidea. The primary characters used for identification are: presence/absence of tube feet; body shape (i.e. vermiform, encrusting, etc); ossicles; the nature of the calcareous ring; polian vesicles; structure of the feeding tentacles. Caution is definitely needed when dealing with ossicles in this group as they change, in some cases disappearing, with growth/age. Juveniles of many species will have very different looking ossicles from those of their adult counterparts. Time was mostly spent on the Dendrochirotida as the Apodida holothuroid taxonomy is in flux and most in that Order are left at a genus level ID. Descriptions and images of the various types of ossicles were discussed. It is important when looking at holothuroid ossicles to know where and how to properly dissect the tissue for an ossicle mount. One of the more mystifying, (personally), tasks is determining dorsal/ventral on

an animal that is shaped like a cylinder, with a hole at either end…but this can be of importance when trying to determine where to remove tissue. The proper dissection and observation of calcareous ring morphology was also reviewed as this is a character of importance. The Holothuroid chapter by M. Bergen in the MMS Atlas, Vol 14 and Lambert 1997, are both good sources of information and an excellent place to start.

On a final note, we discussed the usefulness of internet sources for identification assistance. Internet resources are constantly expanding and there is some valuable information to be had, especially as now some of the museums are scanning in old literature collections and making them available. However, always use caution when viewing images on-line and their associated species names. Unless you know the source (person/agency) of the taxonomy, you should not assume the identification is correct.

The afternoon was spent examining specimens.

JULY 13 2009

Larry Lovell opened the meeting with business of the organization. Larry announced that webmaster Jay Shrake was stepping down after many years of service to SCAMIT. Jay developed the SCAMIT website years ago and has maintained it ever since. Dean Pentcheff (NHMLAC) has agreed to become the new webmaster and will be assisted by Katja Seltmann. They are currently reworking some behind the scenes aspects of the website pages to make it easier to update in the future. This means the website will remain unchanged and out of date for a period of time. Treasurer, Cheryl Brantley has submitted the treasurer's report for the past fiscal year for inclusion in the next newsletter, it details funds available for grants. We will begin taking applications for Taxonomic Publication Grants from June until the end of December. See the website Grants toolbar for more information regarding the application process.

The July 13 meeting was a digital imaging workshop by Dan Ituarte and Nick Haring, CSD. The minutes from that meeting are going to be combined with the minutes from the most recent digital imaging workshop, also by Dan Ituarte and Nick Haring, and which just took place on June 14 2010. It is thought that in this way a clean, composite, synopsis of information can be created and provided to members.

AUGUST 17 2009

The meeting was held at the Orange County Sanitation District marine biology lab. President Larry Lovell opened the business portion of the meeting with having everyone introduce themselves. Larry will be sending out an e-mail to assess interest in having a class on packing specimens for shipping purposes.

Upcoming meetings were then announced:
September 10th – Taxonomic database meeting with consultant Katja. We would like to use SPECIFY as a test case with the aplacophoran images from Don Cadien and Kelvin Barwick's work during Bight '03
September 16th – Barcoding colloquium at SCCWRP with Dr. Paul Hebert
September 21st – Bight '08 trawl invertebrate meeting at SCCWRP
October 5th – Terebellids with Dr. Joao Nogueira from Brazil, at Los Angeles County Museum
October 19th – *Tellina* and *Nuculana* at Orange County Sanitation Districts

November 2nd – possible meeting on Bight '08 problem animals (non-polychaetes)
November 16th – Decapoda 101 with Lisa Haney at Los Angeles County Sanitation District
December 5th – Christmas Party at Cabrillo Museum; 5-9pm; SCAMIT will provide ham and sodas. Please bring a potluck dish.

Larry then gave us an update about the website. The webmaster is doing work behind the scenes and Larry will let us know when the facelift is complete and will ask for feedback.

We all then received a gentle reminder to pay annual membership dues.

LACSD recently had a visitor, Jingchun Li from the University of Michigan. Jingchun went out on trawls with the staff for a few days. She is studying *Neaeromya rugifera*, a commensal clam that lives with *Aphrodita*. The clams can attach to the ventral side of the worm by byssal threads. More commonly, the clams are inside the branchial chamber of the worm. Jingchun is requesting specimens that are preserved in 95% ethanol.

Larry announced that SCAMIT will produce a new calendar for 2010; if anyone has images they'd like to submit for consideration please send them to Larry (llovell@lacsd.org). Animals are not restricted to Southern California invertebrates.

Tony Phillips brought in an interesting animal for show and tell. It was an entire specimen of *Cerebratulus marginatus* that was 4 feet long when it came up hanging from a benthic grab. The body color was reddish-brown, and the lateral margins were yellow. The animal was captured at Station HM9 in Los Angeles Harbor at a depth of 23m.

Ron Velarde is identifying all the syllids for Bight'08 samples, and he requested that everyone gather and deliver their syllids to him.

Larry passed around three new polychaete articles, which are listed below:

Reuscher, Michael, Dieter Fiege, and Thomas Wehe. 2009. Four new species of Ampharetidae (Annelida: Polychaeta) from Pacific hot vents and cold seeps, with a key and synoptic table of characters for all genera. Zootaxa 2191: 1-40.

Aguirrezabalaga, Florencio and João Gil. 2009. Paraonidae (Polychaeta) from the Capbreton Canyon (Bay of Biscay, NE Atlantic) with the description of eight new species. Scientia Marina 73(4): 631-666.

Tovar-Hernández, María Ana. 2008. Phylogeny of *Chone* Kroyer, 1856 (Polychaeta: Sabellidae) and related genera. Journal of Natural History 42(33): 2193-2226.

The rest of the meeting was dedicated to examining unusual and problematic specimens that have been encountered in Bight '08 samples.

First up was a specimen of *Sonatsa carinata* (Moore 1923) provided by Larry that was collected from the N. Channel Islands. Ricardo Martinez-Lara and Veronica Rodriguez-Villanueva had a similar specimen that was larger than Larry's specimen. The uncini counts did not match; Ricardo will investigate further and get back to us about his specimen.

Next Kathy Langan showed us a Trichobranchid from Station 7121 at a depth of 861m. There was a main branchia that split into 4 branches; the two outer ones were fimbriated and well developed, and the two inner ones were less developed. This specimen was not Cheryl Brantley's Trichobranchidae Genus A. Kathy will take the specimen back to the lab for further investigation.

We examined a nice specimen of *Glycera branchiopoda* that Larry found at Station 7200 at a depth of 836m.

Then Larry showed us a specimen of *Dodecamastus mariaensis* from Station 7296, depth 610m. The specimen was entire and had arborescent branchiae starting on setiger 16. *D. mariaensis* is described in Hartman's Atlas as having 10 setigers with capillary setae; Larry's specimen had nine setigers with capillary setae. There were 12 thoracic setigers with hooded hooks.

The next specimen was *Glyphanostomum pallescens* which Larry found at Station 7250 at a depth of 609m. It is described in the MMS Atlas. There were no palae and the lower lip area was very compressed. The specimen also had a unique methyl green stain pattern.

We examined several specimens of *Anobothrus* that had an unusual suite of characters. They were found by Kathy at station 7082 at a depth of 1023m. They had 12 thoracic uncinigers and raised glandular bands on setigers 5 and 10. There were 3 pairs of branchiae, and the palae were splayed out similar to *Eclysippe trilobata*. We considered the possibility that they were *Anobothrus bimaculatus*; however, this species has 11 thoracic setigers and 4 pairs of branchiae. We went through a couple of keys and didn't come up with anything like these specimens. So they will be a provisional species, *Anobothrus* sp SD 1, and Kathy will create a voucher sheet.

Larry showed us a specimen of *Mexamage longibranchiata* from station 7288, the San Pedro lower slope, at a depth of 806m. *M. longibranchiata* is described in the MMS Atlas and has a distinct raised area on the prostomium.

Both Veronica and Larry had specimens of *Aricidea (Acmira) rubra* Hartman 1963. Larry's specimen came from station 7250, depth of 609m, and Veronica's specimens came from stations 7104 (556m) and 7109 (870m). We viewed the papillary protuberances which were quite prominent in one specimen.

The next specimens examined were *Levinsenia oculata* (the real one, not *L.* sp B). They had large eyespots and 8-11 pairs of thin branchiae. The specimens were provided by Larry (station 7200, depth 836m) and Veronica (station 7022, depth 653m).

Veronica showed us a specimen of *Aricidea (Allia) hartmani* collected at SBOO station I-3 Rep 2 at a depth of 27m.

Larry had an unusual specimen of *Arcteobia* sp from station 7298, depth 43m, from San Pedro mid-shelf. There were both acicular and capillary setae in the notopodia; the capillary setae were in the inferior position. It had fairly long dorsal cirri and pigment on the posterior edges of the elytra. Ron and Tony commented they have seen this worm too. Under the compound scope, we viewed the long, thin tips of the capillary notosetae and the acicular notosetae with a row of hooks. Larry added that *Arcteobia* can be commensal with the echiuran *Listriolobus*.

Next we refreshed our memories regarding Cheryl's Trichobranchidae sp LA1, described from B'03 and compared it to Kathy's Trichobranchid that we viewed earlier in the day. They are clearly different beasts. Larry had a specimen of Trichobranchidae sp LA1 from a B'08 station 7200, depth of 836m. On this specimen there were 4 pairs of branchiae and a vascular loop under the branchiae, which is described and photographed in Cheryl's identification sheets. These sheets are available on the website under the taxonomic tools section.

Next up was a specimen of the Orbiniid *Califia calida* provided by Larry. It was collected at station 7206 at 598m. The branchiae started on setiger 9 and continued on, almost to the end of the body.

Larry then showed us *Naineris cf grubei*, which was collected at station 7298 at a depth of 43m. The specimen had a smaller, rounded prostomium that looks similar to a regenerating anterior end. The branchiae started on setiger 5.

Next to be examined was a specimen of *Leiochrides hemipodus* Hartman 1960 provided by Larry. It was collected at station 7206, San Pedro lower slope, at 598m. Setiger 1 is uniramous and there are 12 setigers with capillary setae. Setigers 5 and 6 stain darker in the thorax region. Ricardo also found *L. hemipodus* at station 7079 at 811m.

Then we viewed a specimen of *Spiophanes fimbriata* brought by Kathy and collected at station 7096 at a depth of 318m. The nuchal organs were obvious and had a wide space in between them as compared to *S. kimballi* where the nuchal organs are much closer together.

Dot Norris gave us a tip for staining cirratulids; she first rinses them in freshwater and then places them in the methyl green stain. She said the stain is more pronounced this way.

Larry finished up the meeting by giving us some pointers on identifying anterior ends of lumbrinerids and Euclymeninae sp A. Noting the type of hooks, acicular color, and the structure of the setal lobes can identify Lumbrinerid anterior ends. Combinations of those three characters will allow species level identification with good confidence. For example, composite hooks, black acicula, short pre and post-setal lobes = *Lumbrineris ligulata*; composite hooks, yellow acicula, short pre and post-setal lobes = *Lumbrineris cruzensis*. Get familiar with the look of lumbrinerid anterior ends by examining and comparing complete specimens of the different species to one another and to fragmented specimens. The staining of the ventrum of anterior ends of Euclymeninae sp A differs from *Praxillella pacifica* and *Petaloclymene pacifica*. A comparison of images by Kelvin Barwick illustrates the differences (see the website toolbox, "3 maldanid staining patterns" in the Maldanidae folder). There is a deep and wide non-staining gap at the ventral midline of setiger 1 on Euclymeninae sp A. The setiger 1 ventral staining patterns for *Praxillella pacifica* and *Petaloclymene pacifica* are very similar, but those species can be separated by their anterior neuropodial uncini - acicular spines in *Praxillella pacifica* and rostrate uncini in *Petaloclymene pacifica*. When seen side by side on the same page, the staining patterns of these three species are very distinct when at least 3 setigers are present.

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Please visit the SCAMIT Website at: www.scamit.org

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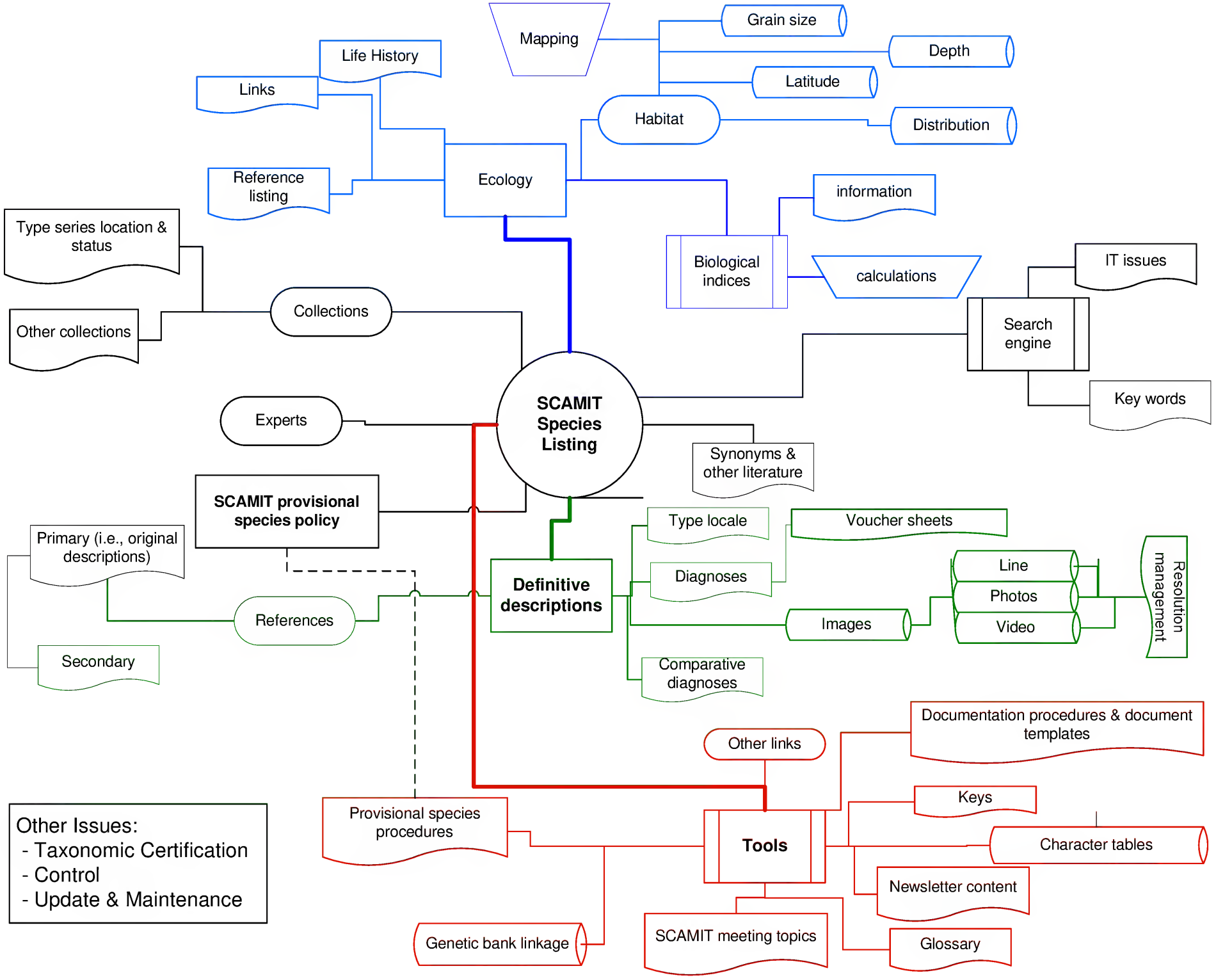
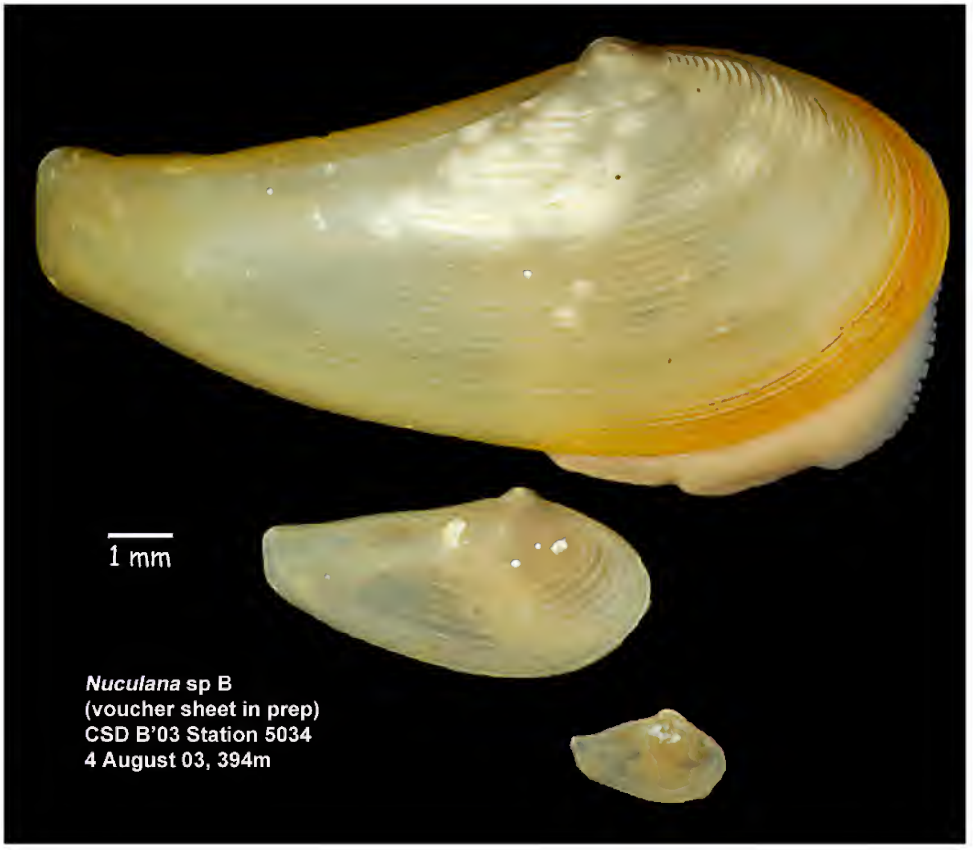

SCAMIT Species Listing
Ecology
Life History
Links
Reference listing
Mapping
Grain size
Depth
Latitude
Habitat
Distribution
Biological indices
information
calculations
Collections
Type series location & status
Other collections
Search engine
IT issues
Key words
Experts
Synonyms & other literature
SCAMIT provisional species policy
Definitive descriptions
Type locale
Voucher sheets
Diagnoses
Images
Line
Photos
Video
Resolution management
Comparative diagnoses
Primary (i.e., original descriptions)
References
Secondary
Other links
Documentation procedures & document templates
Keys
Tools
Character tables
Newsletter content
Glossary
SCAMIT meeting topics
Provisional species procedures
Genetic bank linkage
Other Issues:
- Taxonomic Certification
- Control
- Update & Maintenance

SOUTHERN CALIFORNIA ASSOCIATION OF MARINE INVERTEBRATE TAXONOMISTS

Sept/Oct/Nov/Dec, 2009 SCAMIT Newsletter Vol. 28, No. 3&4



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The SCAMIT newsletter is not deemed to be a valid publication for formal taxonomic purposes.

10 SEPTEMBER 2009

The SCAMIT Taxonomic Database meeting was held at SCCWRP. President Larry Lovell opened the meeting with announcements of upcoming meetings. Tony Phillips commented on recent collections of *Brachiomma*, the holothuroid *Myriotrochus*, and *Branchiosyllis* in SD Bay samples. Don Cadien informed the group that a graduate student from the University of Michigan, Jinchung Li, is doing genetic research on nesting clams, *Mysella* spp, found attached to the ventral side of *Aphrodita* species, under the dorsal felt, and to the ventral side of the abdomen on *Upogebia pugettensis*. She accompanied LACSD on a trawl day in August looking for specimens. Unfortunately we did not collect *Aphrodita* hosting any of her clams, but she requests specimens from other labs if they should encounter them. The clams can be discovered by palpating for hard lumps under the dorsal felt.

UPCOMING MEETINGS

13 September 2010 - B'08 QA review meeting at LACSD. Agencies involved: LACSD, ABC, and CLAEMD.

4 October 2010 - B'08 QA review meeting at CSD. Agencies involved: LACSD and CSD.

18 October 2010 - B'08 Synoptic Data Review at SCCWRP in the medium conference room. All B'08 taxonomists are encouraged to attend.

Dr. Peter Miller, Molecular Technology Coordinator at SCCWRP, was introduced to the group and made brief comments regarding the Benthic Invertebrate Barcoding project he is leading. The project will develop a library of barcodes for the benthic invertebrates offshore for potential use in biological assessment indices. SCCWRP and Peter are interested in working with POTW member agencies and SCAMIT to collect and properly identify specimens for barcoding. The Canadian Centre for DNA Barcoding at the University of Guelph in Ontario, Canada has agreed to barcode the material at no cost. The US EPA Molecular lab in Cincinnati, Ohio is also involved in this project. The NHMLAC has agreed to accession the identified DNA voucher specimens into their invertebrate collections. Peter also made an announcement regarding a Barcoding Colloquium he is organizing. It has been postponed, but will be rescheduled for early 2010. He will announce the new date when it becomes known.

Ananda Ranasinghe reported on upcoming plans of the SCCWRP Benthic AssessmenT MANagement (BATMAN) group. He began with a brief intro to the Benthic Reconnaissance Index (BRI), its use and the linkage with the SCAMIT species list. Species or taxa (groups of species) are assigned P-codes (or not) based on their occurrence and placement along a pollution gradient in the origination dataset. Each P-code has a P-value, which is used to calculate a BRI score for the community or organisms at a station. Changing taxonomy that affects names reported in the origination dataset is a challenge to maintaining the P-code list and the BRI process. The Taxonomic Database species list will be updated on a regular basis and those changes effecting P-code taxa will be reviewed for possible revisions to the P-code list. The BATMAN group recommends that the Taxonomic Database maintain three tables for BRI users to access the current version of the species list and P-codes; 1) P-codes and P-values; 2) Taxa names

and corresponding P-codes; and 3) P-code definitions for those taxa. The BATMAN group will be meeting soon to review and revise the current P-code list, test the calculation tools in use, and validate the BRI process in use at various labs.

Wendy Enright provided an Ed 5 update. There have been no additional changes to the species list. Larry inquired if the CSD review of the miscellaneous phyla had been completed and she stated that it was completed some time ago. The taxonomic database will contain an online process by which future updates/changes to the list will be submitted, vetted by a committee, and accepted or rejected. This will allow the species list to be updated on a regular basis. There will be electronic versions that are date stamped for use and it is unlikely that hardcopy distribution by SCAMIT, as with past versions, will occur unless deemed necessary for some application or use.

Next Larry provided an ontologies update. Much progress has been made in 2009, but very little since the last meeting. There are still some groups lacking ontologies, the oligochaetes, cnidarians, sipunculids, and a few other miscellaneous phyla groups. Many of the character states lack definitions, but those can be added at a later date. Larry maintains a list of completed ontologies and the Excel spreadsheets prepared by Deb Paul at Morphbank. Those spreadsheets have been distributed to each POTW lab manger or supervisor for use. These ontologies will be used to standardize character state representation in the image submittal process to Morphbank.

Cheryl Brantley informed the group on the status of getting all the old Newsletters posted on to the website. She began by reviewing the prior activities 1) scanning of old (non-electronic) printed newsletters by OCSD interns two summers ago; 2) partial OCR by Rick Rowe and inheritance of the OCR process by LACSD upon Rick's retirement; and 3) uploading of NL's back to 1992. There is further work to do on years 1982-1991. The large scanned pdf files will need to be examined, parsed by individual newsletter, and OCR'd.

Cheryl and Larry provided a brief update on Morphbank and Specify. Larry stated that Dr. Greg Riccardi at Morphbank has been in discussion with Specify regarding adding an image upload to Morphbank function to the Specify collection management software. Cheryl said the plan to use Specify 6.0 as the Bight'08 infaunal voucher collection management tool may not be viable. There is restricted user support at Specify as a result of funding issues, so we may end up using Specify 5.0 instead.

After lunch Larry reported on the funds still available to support the consultants working on this project. Of the $15,000 OCSD provided the last two years, there is a little over $11,000 remaining. We have been frugal in using those funds, but have been making steady progress. SCAMIT members and their "on the job" time have supported much of the effort. The money has been spent on two primary tasks; 1) updating the website and improving/adding content; and 2) development of the Species Presentation page and formatting the species list database. We will continue to develop the Species Presentation page, added image content (Aplacophoran Bight'03 images and metadata), and add content to the website, with the goal of having a beta version of the Taxonomic Database ready this coming fall.

Cheryl demonstrated the LACSD Fish Identification field guide. Some of the display and linkage functions developed for this guide mimic those envisioned for the Taxonomic Database. It was desired that Katja have the opportunity to see the layout and function. The content of the Miller and Lea fish guide keys, illustrations, and species info are included (with permission) as well as photographs of many of the species. LACSD OMRG staffers Fred Stern and Chi-Li Tang developed this guide.

Katja Seltmann discussed progress on the dynamic species page. We displayed a trial version to review the layout. The SCAMIT banner from the website is displayed as the header followed by the species name and synonym information, space for a Morphbank image, and the GoogleMaps display. There is no occurrence data to populate the GoogleMaps as yet. It was discussed that the Bight program data sets would be good occurrence datasets for that purpose. The names used in the data are SCAMIT standardized and the data is rich in diversity with a spread of samples throughout the Southern California Bight. Shelly Moore joined the group for a brief discussion on accessing the data from the SCCWRP website. Katja will incorporate that occurrence data into the species page presentation for the next meeting.

Larry opened the topic of additional future funding opportunities. Karen Stocks from the SuperComputer center at UCSD spoke about programs from NSF on bioinformatics that might be suitable funding vehicles for the Taxonomic Database project. Larry mentioned the BioSync proposal that had been submitted. It was not funded but we were encouraged to resubmit. Larry recently met with SeaGrant as they might have some possible funding. The good news - they like SCAMIT as an organization, our purpose, and the taxonomic database project. The bad news - there is quite a lot of competition for their funds and a proposal needs to be in a research setting. SeaGrant also has program development funds that might be more suitable for us. Larry mentioned the idea of using the Bight'03 Aplacophora to demonstrate the capabilities of the taxonomic database.

The meeting closed with discussion on a project on which Karen Stocks was approached. There is a professor at SDSU who teaches a graduate level class in the Computer Sciences Department who is looking for real-world examples for class projects. Karen thought there might be some aspect of our database project that might benefit from this interaction. There's thought of having the grad students use the Ed5 species list to create a web-interface and relational database that organizes literature citations. Karen will act as the mentor to the class and interface with SCAMIT.

5 OCTOBER 2009

The minutes from the October 5th Terebellid polychaete meeting will be published in a future issue of the newsletter.

19 OCTOBER 2009

The meeting was opened by our president Larry Lovell. He started with business announcements and the upcoming meeting schedule.
The status of the SCAMIT calendar is not looking hopeful. There have been no image submittals by members which may result in no calendar this year.
Dean Pasko announced that there were many B'08 problem crustaceans and a meeting to resolve ID difficulties was needed.

The taxonomy portion of the day started with Lily Sam giving her presentation on *Philine auriformis*, and talking about her current research. She is looking for specimens and feedback on problems.

Next Kelvin Barwick had the floor and started by presenting a *Tellina* character table compiled by polling most of the principal mollusk taxonomists working in the SCB. It is an agency by agency look at how external shell morphology and color characters are applied to the identification of the

most common species of *Tellina* reported (*Tellina modesta*, *Tellina carpenteri*, *Tellina cadieni* and *Tellina* sp B). Included were published descriptions from Coan, et al, 2000 and various SCAMIT voucher sheets, if available. See attached table. Along with revealing some terminology issues the main problem is *T.* sp B versus *T. cadieni* which are found offshore and in bays respectively. The two species appear to be separated by depth. Tony Phillips (CLAEMD) and John Ljubenkov call the bay specimens *T. cadieni* (it was originally described from a specimen collected in Anaheim Bay) and offshore specimens *T.* sp B. City of San Diego, however, identifies their offshore specimens as *T. cadieni* and has no *T.* sp B in their data set. CSD does not usually sample in bays. However, Kelvin remarked that in his years at San Diego, he never made the distinction between *T.* sp B and *T. cadieni*. This would include bay samples he has worked on. Ron Velarde, CSD, stated that he took off shore specimens identified as *T. cadieni* to Paul Valentich-Scott for review. After examination Paul, at the time, agreed with the identification of *T. cadieni*. Some members present contend that there are differences but were hard pressed to quantify the differences. No one present could remember seeing a voucher sheet for *T.* sp B SCAMIT, 1995. Nothing could be found on SCAMIT.org. Since there appears to be some differences in approach amongst the agencies it was suggested that the internal characters should be tabulated for all four species. Kelvin volunteered to make the observations and record the data. Each agency representative in attendance agreed to provide the specimens. Don Cadien agreed to help with drawing up a set of characters to be tabulated for the project.

Kelvin then revealed work on *Nuculana* spp he has been doing with Linda Kuhnz of MBARI and Paul Valentich-Scott of SBMNH. Specifically regarding the identity of specimens recorded as *Nuculana leonina* by SCAMIT members in the SCB. Images of these specimens were compared with *N. leonina* collected from Cascade Slope, Oregon (Figure 1), and Monterey Bay, California as well as the holotype for *Leda amiata* Dall, 1916.

All attending concurred that the *N. leonina* identified by SCAMIT members most likely represents an undescribed species and should be given a SCAMIT provisional designation, *Nuculana* sp B (voucher sheet in prep). See the cover of this newsletter for images. Kelvin then turned the floor over to next speaker.

Fig. 1 - *Nuculana leonina* Cascadia Slope Sta. EBS-64, 5JUL195, 950 m

Ron Velarde started by presenting pictures of various species of *Boreotrophon*. *B.* nr *keepi* was found off Encinitas in 484 ft of water (Figure 2); *B. bentleyi* specimens were found by both CSD and LACSD (Figure 3). Shell structure/spines are an issue for this species; *B. avalonensis* was viewed next (Figure 4); *Scabrotrophon grovesi* was seen and agreed upon by all present.

Ron then showed us an unidentified *Boreotrophon* sp from a CSD B'08 trawl. Don Cadien was able to identify it as *B. eucymatus*. There were some questions raised but Ron does not have any concrete answers only more questions. It is, without a doubt, a difficult group. The Gastropod MMS atlas by McLean and Gosliner does cover all the species reported. The images are not that useful for separating species, but the key seems to work well. Ron then mentioned that his friend Paul Tuskes of the San Diego Shell Club has photos of several species of *Boreotrophon* from shell club members. The

specimens range from Alaska, to British Columbia, to southern California.

Fig. 2 – *Boreotrophon* nr *keepi* fide J. Ljubenkov with the anemone *Stephanauge annularis* Carlgren 1937 attached. (Image by J. Ljubenkov)

Tony Phillips had also brought specimens of this genus. He started with a dead specimen of *Boreotrophon pedroanus*. Next was a *B. multicostatus* which was also dead, however, CSD had collected a live specimen from Santa Cruz Island during the B'08 sampling. We then viewed various and sundry unidentified dead specimens of *Boreotrophon*. It was discussed that the ratio of the length of the aperture to the siphonal canal can be used to distinguish species. Tony then showed us a *Scabrotrophon maltzani* which had been collected during a SMB USGS special study in 105m.

It was mentioned that more mollusk meetings are probably needed. Wendy Enright suggested scaphopods and cephalaspidians as good groups to review.

We next delved into a discussion of the genus *Cylichna*. Tony Phillips had brought a specimen of *Cylichna attanosa* from the Avalon Harbor outfall in 30m. We compared this specimen to *C. diegensis*. This then lead to further discussions on the identification and distribution of the genus. It was noted that *C. alba* is more northern in distribution and shouldn't normally be sampled by the local agencies.

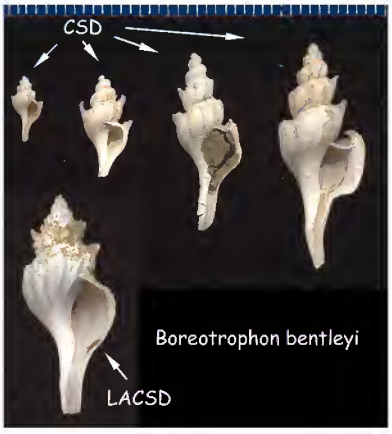

Fig. 3 – *Boreotrophon bentleyi* No collection information . Scale in millimeters. (Image by K. Barwick 6APR2004)

Lastly Wendy Enright shared some specimens she had brought for review. From B'08 station 7111, at 517m, was a *Lirobittium* sp. She was hoping for a species level ID but none was forthcoming from the members present. Next were numerous specimens of *Modiolus* from B'08 station 7527 at 42m. After review it was determined that all were juvenile *Modiolus sacculifer*. And finally a small specimen of *Calliostoma* also from B'08 station 7527. Due to its small size it was decided it should be left at *Calliostoma* sp, juvenile.

Fig. 4 - *Boreotrophon avalonensis* from CSD Sta. DB5, 10/17/05 318m. Scale in millimeters. (Image by K. Barwick)

30 OCTOBER 2009

President Larry Lovell attended the SAFIT annual membership meeting Friday, October 30, 2009 in Davis, CA representing SCAMIT. SAFIT holds an annual membership meeting each year to report on the past year's activities, project plans for the coming year, vote on new officers, and discuss

business of the organization. They are a relatively new organization modeled after SCAMIT. Of particular interest to SCAMIT and our own activities were discussions on upcoming meeting topics and the SWAMP QA workgroup report.

During discussion of upcoming meetings, Larry expressed the continued interest by SCAMIT in co-sponsoring an oligochaete workshop with SAFIT. It has been anticipated that implementation of SQO monitoring requirements (with IBI metric) for evaluating community pollution tolerance will require a more detailed taxonomic assessment of the oligochaete fauna than is currently in practice by most (Oligochaeta) annelid taxonomists. This would require a significant change in the annelid taxonomic effort and establish a need for training workshops.

Dr. Pete Ode presented a report on the SWAMP QA Workgroup. He reported that the Stormwater Monitoring Coalition (SMC, a SCCWRP managed project) has developed a Quality Assurance Program Plan (QAPP). SWAMP will extract from the SMC QAPP and insert contents into its master QA plan. Larry noted the differences between freshwater and marine monitoring programs and asked about the appropriateness of freshwater protocols being applied to marine programs. Pete replied that SWAMP plans to have specific protocols for different bodies of water (fresh vs. marine), but acknowledged the possibility of misapplication of differing protocols. It was acknowledged that there were still issues with defining QA triggers and setting limits on corrective action for failed samples. Applying chemistry QA protocols to biological samples is a problem and Pete is pushing for developing and defining a purely biological approach to QA. Additional funding for that work is being sought. The SWAMP QA plan will likely be adopted by the RWQRBs throughout the state and be a requirement of all POTW ocean monitoring permits in the future.

Jim Harrington of the California Department of Fish and Game discussed ongoing issues scientists are having getting and renewing Scientific Collecting Permits. There are issues with F&G staffing and the processing system itself. There is discussion within F&G that might lead to significant changes. He asked for feedback and ideas from SAFIT members to share with F&G staff.

Other items of business discussed were support of young scientists, recruitment of new members, and the expansion of workshops/activities to other states within the SAFIT umbrella. The SAFIT logo contest was extended after review of those submitted. The desired qualities and minimum requirements of a logo were redefined for the next round of submittals (our SCAMIT logo is wonderful and is an example others emulate).

2 NOVEMBER 2009

Attendance: Megan Lilly, Tony Phillips, Don Cadien, John Ljubenkov, Ken Sakamoto, Laura Terriquez, Christina Thomas, Larry Lovell, Wendy Enright, Cheryl Brantley, Nick Haring.

The meeting was opened by President Larry Lovell. He announced upcoming meetings which are as follows: Nov 16 2009, Decapoda 101 at LACSD; The annual WSN meetings will be from November 15 -18 2009; Saturday, December 5 2009, will have us celebrating during the SCAMIT Christmas party which will be held at the Cabrillo Marine Aquarium from 5-9pm; December 14 2009, B'08 Crustaceans at OCSD; January 11 2010, TBD Review of papers affecting local name usage in Polychaete conference proceedings and a review of provisional species; Thursday, Jan 21 2010, Taxonomic Database meeting at SCCWRP; Saturday, January 23 2010, the annual SCUM meeting will be held at the City of San Diego led by Wendy Enright; February 8 2010, a continuation of the digital imaging workshop at CSD; June 20-26 2010, the Tenth International

Polychaete Conference; June 2010, WSM/ AMS meetings at San Diego State University. Larry then touched briefly on the SCAMIT website upgrade. It is almost complete and we were able to get a peek at it when Larry logged in on the overhead projector screen. Some of the new features are the membership application page; older newsletters prior to 1992 have been scanned and uploaded; many "typos" have been fixed; old toolbox files have been incorporated; and the broken links have finally been repaired and updated. It was noted that the Spatangoida voucher sheet on the test site probably needs permission for use. Tony Phillips, CLAEMD, said he would look into it.

Larry announced that sadly, again, there were no image submittals by members which will result in no calendar this year.

Cheryl Brantley, LACSD, then had the floor and brought up the topic of the Bight'08 voucher collection. Leslie Harris, NHMLAC, will provide the outer label, and we will need to re-vial. There was some discussion of combining the B'08 and B'03 voucher collections. As for using the program Specify to track the collections, there was no funding and museum wants to use their own data system.

With that it was time to review unusual or difficult Misc Phyla or Echinoderm specimens encountered by B'08 taxonomists. We started with an asteroid specimen brought by Christina Thomas of OSCD. The animal was brought up during their trawls and was very small. After review by fellow taxonomists it was decided the ID should be left at Asteroidea as it was too juvenile of an animal to identify with any accuracy.

Cheryl Brantley wanted to discuss *Amphiodia* sp LA1. She presented both images and specimens for our review. Nick Haring, CSD, had some juvenile specimens that he thought might be this species. This *Amphiodia* is unusual mostly in the extremely long length of its arms. Additionally, it was noted that the tube feet on the animal were very long, extended and appeared almost beaded. However, it was felt that the length and appearance of the tube feet could be a preservation artifact. Megan Lilly and Nick Haring will work on these specimens further and take additional photos.

Cheryl had also brought a small holothuroid which was determined to be too juvenile to speciate. Everyone was reminded of the fact that ossicles change with growth and often times the ossicles of juvenile holothuroids will differ from those described from their adult couterparts.

Megan Lilly brought a specimen of *Ophiacantha* from B'08 Station 7092, 946 m. After examination by all present and taking it through various keys, it was decided to leave it at *Ophiacantha* sp, juv. It was just at the cusp of being mature enough to differentiate between species.

CSD was excited to have sampled their first *Brissopsis* sp LA1 from B'08 Station 7099, 526m. It has been suggested that this unusual species may represent a hybrid of the genera *Brissopsis* and *Brisaster*. The animal was available for examination.

Nick Haring had brought a *Ceriantharia* specimen for review. Our resident Anthozoan expert, John Ljubenkov, determined it to be too juvenile for speciation.

CSD also wanted to take advantage of the presence of Tony Phillips, our resident flat worm expert, and showed him a specimen that Nick Haring had identified as *Stylochoplana* sp HYP. Tony was able to verify Nick's ID.

And finally, Tony Phillips had brought a specimen of *Tubulanus* sp SD 1 for review. This is a beautiful nemertean and is similar in appearance to *T. frenatus* so care must be taken during identification of these species.

16 NOVEMBER 2009

Attendance: Larry Lovell, Don Cadien, Constance Gramlich, Christina Thomas, Julianne Kalman, Ken Sakamoto, Carol Paquette.

The meeting was called to order by Larry Lovell. He started the day by announcing upcoming meetings and touching on business items.

With that it was time for "Decapoda 101" led by Lisa Haney. She started by handing out a notebook to each participant. She stated that the meeting would be a review of the contents of the notebook. She emphasized that the notebook was just a starting to point to be added to as new or additional materials were acquired. Most of the day was spent examining specimens and practicing using the notebook as an identification aide. Lisa spent her time providing assistance and answering questions individually.

Below are decapods of the five major groups handed out for examination and ID using features presented.
Penaeid shrimps – *Sicyonia* and *Sergistes*. These are primarily trawl caught but are sometimes seen in benthic samples (*Sergistes*). There were no specimens presented for examination.

Caridean shrimps – Specimens were distributed and features discussed. Lisa recommended the following as the best primary reference for this group: Butler, T. H. 1980. Shrimps of the Pacific Coast of Canada. Canadian Bulletin of Fisheries and Aquatic Sciences 202.

Mud shrimp – *Neotrypaea* and *Upogebia*.
Neotrypaea: the resolution of *N. gigas* vs. *N. californiensis* using morphological features was discussed. The fact that they are separate species has been verified with genetics. Size of a specimen can be an issue, juveniles are difficult to differentiate. Carole Paquette brought specimens from Long Beach Harbor (San Gabriel River) that were too small to speciate.

Anomurans (Hermit/Pagurids, Galatheids, and Mole crabs/Lithodids). Specimens were distributed for ID with a key by Don Cadien as well as a picture key that Don and Dave Montagne produced.

Brachyurans (True Crabs) - calappids, cancrids, portunids, pinnotherids, spider crabs, sheep crabs, decorator crabs, *Pinnixa*, panopeids, and grapsids. A review of the key was conducted.

5 DECEMBER 2009

The SCAMIT Christmas Party was held Saturday, December 5 from 5-9 pm at Cabrillo Marine Aquarium in San Pedro. CMA kindly hosted us allowing use of their facilities again. This was the second year of this renewed event after a 10-year hiatus. There were about 25 members and family members who attended. SCAMIT provided honey-baked ham, drinks, and eating utensils. Members brought a wonderful selection of potluck dishes for all to share, including great desserts.

Holiday music was piped through the PA system while we had access to the display tanks and courtyard. Adults and children all enjoyed casually wandering the exhibits enjoying the animals on display. Santa could not pay us a visit this year, but there were gift bags for the kids attending.

Julie Kalman and the staff of CMA were wonderful hosts. The gift shop was open at the beginning of the evening and SCAMIT members got 20% off their purchases, perfect for holiday shopping! I am sure we'll be back again next year, so plan to attend and enjoy this opportunity to spend time with other SCAMIT members and family in a non-meeting setting.

14 DECEMBER 2009

Attendance: Ron Velarde, Christina Thomas, Ross Duggan, Kelvin Barwick, Don Cadien, Tony Phillips, John Byrne, Larry Lovell, Dean Pasko, Ken Sakamoto.

Larry Lovell started the day with upcoming meeting announcements. 11 Jan 2010 will be B'08 Crustacea at City of San Diego; 21 January 2010 will be a taxonomic database meeting at SCCWRP; 25 January 2010 will be B'08 polychaetes at the LACMNH; 8 February 2010 will be B'08 Phyla TBD at CSD; 22 February 2010 will be B'08 phyla TBD at LACSD; 8 March 2010 will be a polychaete literature review as well as problem polychaete specimens; 12 April 2010 will be the Imaging Workshop II at CSD.
Larry then announced that there will be a SCAMIT membership list server which will replace the Google Groups that were previously used. Larry will email members with this information.
It was mentioned that SCAMIT is very behind on its production of newsletters and the officers involved will do their best to get caught up.
It was noted that the Barnard workshop minutes need to be posted on website.

We then moved on to the topic of the day which was crustaceans. Dean Pasko (OCSD) started us off by discussing *Eudorella pacifica* vs *E. hirsuta*. Specimens encountered in B'08 shelf samples did not match *E. pacifica* because the length of the antennules flagellum was shorter than the basal article of the flagellum, a character used in Watling (1991). After much discussion, we determined that SCB records of *Eudorella pacifica* likely represent a species complex, and the *E. pacifica* cmplx would be recommended for SCB records until the issue can be resolved. Don Cadien stated that in addition to *hirsuta* there are probably other undescribed/unreported species. Dean then showed specimens of *Eudorella*.

Next on the agenda was *Heterophoxus* spp; *H.* cf *ellisi* is from bays; *H.* cf *affinis* is found in deeper waters, and has asymmetry of a primary taxonomic character - setation of article 6 of pereopod 6, single vs paired vs cluster. Setation varies with size, habitat (coarse vs fine sediments). There was discussion of the apparent variability of several characters related to habitat (eco-morphs), or that there are several species that are not being adequately separated. A decision about how to handle the B'08 data will be dealt with at the B'08 data resolution meetings, after there is a better understanding of how the species were reported. For example, some taxonomists speciate specimens with only one P6 available, while others report such specimens as "sp" in recognition of the potential asymmetry. Dean showed specimens of *H. ellisi* and *H.* cf *ellisi* from bay stations, and the undocumented variability. There may be less variability in the shelf-depth stations, but due to the asymmetry of the bay specimens, everyone was again encouraged to us *Heterophoxus* sp for specimens that don't have both legs (P6).

Next was *Caprella* sp WS1 vs *C. californica* vs *C. simia*. We examined a *Caprella* spWS1 from a shallow station at 2.5m, and a *C.* cf *californica* with a thick head spine. *Caprella* sp WS1 is very

much like *C. simia* but with a smooth pereonite 5 (i.e., no dorsal tubercles or knobs). Although Aromoto 1976 (Figures 86-87) showed variations of *C. simia* that included a specimen with smooth pereonite 5, we determined to separate the species. Spination variability on head and articles was noted. The differences of males vs females was also discussed.

A caprellid specimen from Bight'08 station 7596, 15m, identified as *Mayerella* sp, was examined. It had no head spine, only a small nubbin of a bump on the head. It was determined to be *Deutella californica* with head spine variation (very reduced). Another *Deutella californica* from Bight'08 station 7572 also showed similar head spine variation.

Synaptotanais vs *Zeuxo* (*normani*, *paranormani*, *maledivensis*). We studied a *Zeuxo* specimen from a bay sample with a pigmented head region and segmentation. Also examined was a *Synaptotanais* (huge specimen) from a bay sample. *Synaptotanais* is a large, white, robust species with uropodal articles that are distinctly long. *Zeuxo*, on the other hand, tends to be a small, pigmented, much less robust species with uropodal articles that are not clearly ≥3x longer than wide. However, the key in Sieg and Winn (1980) has an unacceptable couplet that uses subtle differences in relative length of the uropods, which are difficult to distinguish without differentiating specimens in hand. We also discussed problems distinguishing species of *Zeuxo*. Resolution of *Zeuxo* records will require the B'08 data review. Finally we looked at a *Anatanais pseudonormani* from Don Cadien B'08 station 7540. It was clear at the meeting that the antenna character used by Sieg and Winn adequately distinguished this taxon from the *Zeuxo* group.

We continued on with *Caecianiropsis* species: First we examined *C* sp LA2 vs *C* sp LA1. Then we reviewed Tim Stebbin's email detailing *C* LA2 vs *C psammophila*. Look at uropod 1 length/width, the mandible is sclerotized in *C.* LA2 but not in *C.psammophila*. We examined a specimen from a 51m Channel Islands sample; the animal was without a sclerotized mandible and had no setae on second article of peropod 2. This animal may be *C. psammophila*, although *Caecianiropsis psammophila* can be most easily distinguished from the two provisionals by the presence of lateral serrations on the pleotelson. B'03 emails distinguishing *Caecianieropsis* sp LA1 and LA2 were resurrected, discussed, and perhaps should be re-distributed.

A specimen reported as *Erichsonella* cf *crenulata* by Dean Pasko was also discussed. It came from Bight'08 station 6211, 2.6m, in Mission Bay. This animal had weird spination on the dorsum. It was a "wow" animal, later determined to be *Erichsonella cortezi* Brusca and Wallerstein 1977.

Other species discussed during the meeting are as follows:

Anorapallene palpida – Dean reported variability of palps related to presence, absence, and development. Multiple specimens from Channel Islands samples were reviewed with palp variability. Follow the B'08 list server email string for a more complete discussion. For now, the group decided to back off to Callipallenidae.

Ammotheidae sp AB1 – A Pycnogonida with no eye structure at all, but with large palps, and functional chela present. The specimen came from Bight'08 station 7493, Channel Islands.

Nebalia sp WS1 – Bight'08 station 6211, 2.6m, bay. The eyes had a different structure and the carapace was deeply incised. It was determined to be a juvenile and reported as *Nebalia* sp.

Byblis sp? – 500m station off San Diego. Ross Duggan took it both ways through the key (*Ampelisca* and *Byblis)* and it did not really fit either. It was decided that it is a *Byblis* due to spines on P5. Using the *Byblis* key in Dickinsen 1982, it keyed to *Byblis* nr *crassicornis*.

Corophium/*Sinocorophium* species – Chapman does not support use of *Sinocorophium*, but has not published on it. *S. aliense* and *S. heteroceratum* name usage was agreed upon.

Deflexilodes enigmaticus vs. *norvegicus* – Bight'08 station 6072, 5.6m, embayment. The following characters were used in coordination with Pasko 2007 key to Oedicerotidae of SCB: Rostrum curved at 90 degrees, telson not emarginate, gnathopods 1 and 2 with deflexed margin. *D. enigmaticus* was the agreed upon ID.

Nipploleucon sp WS1 – Bight'08 station 6060, 1m. The designation was considered valid and a provisional voucher sheet is pending.

Cumella sp WS1 – like *C. californica*. Bight'08 station 7553, 51m, Channel Islands. Flared pereonites, smooth carapace, w/ slight sulcus. Don Cadien noted that *C. californica* can lack spination.

Hemilamprops sp (FID) – Bight'08 station 7442, Channel Islands. Aberrant spination on the telson. 5 terminal subequal, 2 asymmetrical lateral spines. Determined to simply be a variant form and reported as "sp".

Lamprops quadriplicata ? *longispina* – Bight'08 station 7596. Terminal spines on telson are the issue. The central spine was 2x medial terminal spines. The sub-species will not be considered, particularly since some question exists as to consistency of character states. This specimen was similar to, but did not exactly match, the *L. longispina* subspecies. The group decided to go with *L. quadriplicata*.

Vaunthompsonia – Bight'08 station 6211, 2.6m. This animal was taken through Don's key. The specimen had exopods and was determined to be *Cumella* sp E Phillips 1998 from Santa Monica Bay. A male specimen from Bight'08 station 6031, 1.8m was also examined and determined to be *Cumella* sp E.

Podocopids – several species in samples, nice large specimens. Although interesting, the group agreed to stay with the convention and leave at *Podocopida* sp.

And with that, the carcinologists called it a day!

Please visit the SCAMIT Website at: www.scamit.org

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If you need any other information concerning SCAMIT please feel free to contact any of the officers at their e-mail addresses:

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Tellina spp Character Table

Presented 19 October 2009 (revised 30 August 2010)

T. carpenteri Dall, 1900

Character	Coan et al, 2000	LACSD (Bill Power)	CSD (Ron Velarde)	OCSD (John Ljubenkov)	SCAMIT, 1983 (Dall, 1900)
Shell color	pink to rose, with two yellow stripes radiating in an inverted V from beaks	red to brown usually lighter than sp. B	yellow/ pink with triangular areas with less pink coloration (areas seem to correspond to white lined areas of *T. cadieni*)	variegated pink/yellow; prominent radiating lighter colored stripe posterior to umbone on each valve; smaller specimens yellow	pink with some specimens showing white rays
Shell sculpturing	sculpture lacking or of fine irregular commarginal striae	prominent, always present	concentric sculpture (similar to *T. modesta*)	fine closely spaced commarginal ridges	not reported
Reported depth ranges	intertidal to 823m	30-305 m (usually 150-305 m)	off SD 60-200 m, centered at 150m, but can occur out to 400 m	18, 30 - 455 m	0 - 144 m
Other characters	internal radial rib lacking	NA	NA	NA	elongated, more so than *T. modesta* ; moderately inflated, more the *T. modesta* ; almost equilateral to longer anteriorly; rounded anteriorly

T. cadieni Valentich and Coan, 2000

Character	Coan et al, 2000	LACSD (Bill Power)	CSD (Ron Velarde)	OCSD (John Ljubenkov)	SCAMIT
Shell color	light pink to cream, usually with two thin white radial bands posteriorly	not reported	pink with two narrow white lines from umbo diagonally to ventral margin on each valve, wider apart on right valve	rosy pink to dark red	NA
Shell sculpturing	very fine, closely spaced commarginal ribs over entire surface	not reported	only weak fine growth lines	smooth in adult	NA
Reported depth ranges	intertidal to 305 m	not reported	off SD 30-100m, centered at 60m, but can occur out to 200m	56 m (1 record of 6 individuals)	NA
Other characters	with low, wide internal strengthening rib	not reported	NA	larger specimens more inflated than other *Tellina* spp.	NA

Tellina spp Character Table

Presented 19 October 2009 (revised 30 August 2010)

T. sp B SCAMIT, 1995

Character	Coan et al, 2000	LACSD (Bill Power)	CSD (Ron Velarde)	OCSD (John Ljubenkov)	SCAMIT
Shell color	not reported	red to brown	not reported	true pink	NA
Shell sculpturing	not reported	rarely present	not reported	smooth	NA
Reported depth ranges	not reported	30-305 meters	not reported	off shore (18, 30 - 455 m)	NA
Other characters	not reported	NA	not reported		NA

T. modesta (Carpenter, 1864)

Character	Coan et al, 2000	LACSD (Bill Power)	CSD (Ron Velarde)	OCSD (John Ljubenkov)	SCAMIT, 1983(Coan, 1971)
Shell color	white, yellow in some specimens	clear	white	white	white externally and internally
Shell sculpturing	finely commarginal	usually present	concentric sculpture	fine, closely spaced commarginal ridges	shell smooth, shiny
Reported depth ranges	intertidal to 100 m	30-305 m (usually 30 m)	off SD 10-40 m, centered at 25 m, but can occur out to 60 m; in coarser sediments (sand), 0-20% fines	18, 30 - 303 m	NA
Other characters	internal radial riblet just behind anterior abductor scar	NA	NA	NA	internal radial strengthening rib; shell elongated, moderately inflated: longer, rounded anteriorly; pointed , fairly truncated posteriorly

Tellina spp Character Table

Presented 19 October 2009 (revised 30 August 2010)

[*Tellina s* p A SCAMIT, 1995]= *T. carpenteri*

Character	Coan et al, 2000	LACSD (Bill Power)	CSD (Ron Velarde)	OCSD (John Ljubenkov)	SCAMIT, 1995
Shell color	not reported	not reported	not reported	not reported	variegated pink and yellow in conspicuous and constant pattern of mid-valve pink wedge surrounded by inverted yellow V
Shell sculpturing	not reported	not reported	not reported	not reported	fine raised concentric ridges, regular close in juveniles, becoming more widely spaced and fading with growth, lacking in adults
Reported depth ranges	not reported	not reported	not reported	not reported	60 -305 m (probably deeper)
Other characters	not reported	not reported	not reported	not reported	internal strengthening rib present but poorly defined

SOUTHERN CALIFORNIA ASSOCIATION OF MARINE INVERTEBRATE TAXONOMISTS

Jan/Feb/March/April, 2010 SCAMIT Newsletter Vol. 28, No. 5&6

Figure 1- *Lirobittium* sp shell (left) with "brood" attached (detail right) (tick marks = 1 mm); photo by K. Barwick

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The SCAMIT newsletter is not deemed to be a valid publication for formal taxonomic purposes.

11 JANUARY 2010, B'08 CRUSTACEA, CSD

The meeting was opened by President Larry Lovell with SCAMIT announcements. Upcoming meetings are as follows: 25 January 2010, will be a B'08 Polychaete review at NHMLAC; 8 February 2010, will be a Bight'08 mollusk review at CSD; Wednesday, 17 Feb 2010, will be a DNA Barcoding Seminar at SCCWRP; 22 February 2010, will be a Bight'08 polychaete review at NHMLAC, with guest speaker Sergio Salazar-Vallejo; 8 March 2010 will be a meeting which will address any potential name changes based on papers presented at the 9th International Polychaete Conference. Non SCAMIT meetings are as follows: Saturday, 23 January 2010 is the annual SCUM meeting; 20-26 June 2010 will be the 10th International Polychaete Conference in Lecce, Italy, and our lucky fearless leader, Larry Lovell, is attending; 26 June – 2 July will be the annual WSM meetings in combination with the annual AMS meetings, at San Diego State University.

UPCOMING MEETINGS

Monday 15 November 2010 9:30 AM.
Mollusk literature review and Taxonomic Database testbed demo at OCSD meeting room.

Friday, 10 December 2010 (note the date) 9:30-3:30.
Don Cadien, at LACSD, will lead a review of new Arthropoda - Crustacea literature with emphasis on papers reporting newly described/reported species to S. Cal. or revisionary papers effecting name usage or taxonomic hierarchy of our local fauna. Dr. Mary Wicksten will be attending the meeting to contribute and discuss her recent work on Eastern Pacific decapods.

Saturday 11 December 2010 5:30–9:00 PM
SCAMIT Christmas Party at Cabrillo Marine Aquarium. All SCAMIT members and their families are invited to attend. In addition, the officers decided it would be neighborly to invite members and their families of our two sister groups to join us. Invitations will be extended to the members of the Southwestern Association of Freshwater Invertebrate Taxonomists (SAFIT) and the Southern California Association of Ichthyological Taxonomists and Ecologists (SCAITE). It should make for a lively event.

Larry then announced that SCAMIT was creating a membership list server which will replace google groups. Larry will be emailing the members to let them know of this change
It was noted that the Barnard workshop minutes need to be posted on the website.
Tony Phillips announced that the previously rumored job opening at Hyperion (CLAEMD) had run into a snag and was not currently open. Tony also stated the work he'd been doing on *Cirriformia* during Bight'08 had been "enlightening". He will comment further at the next polychaete meeting.

Dean Pasko (OCSD) commented on the differences between the nemertean genera *Carinoma* and *Carinomella*, both of which are found at OCSD deep annual stations. He reminded everyone to check the musculature and lateral nerve chord placement for separation of the genera. Don Cadien commented that there were also differences between the two with regards to head shape and mouth.

With that it was time for Tim Stebbins (CSD) to take over and lead the day's meeting which was dealing with B'08 Crustacea.

Tim had made a check list of problematic specimens which he shared with the group.
We started with *Ampelisca eoa* and *A. coeca* – Due to the fact that *A. eoa* is poorly described, its validity should be considered. *A. cataliensis* is also involved as it is a synonym of *A. eao* by Barnard. Neither of the potential names are on Ed 5. We examined a large, 15 mm specimen from B'08 station 7175, 820m; Antenna 2 wispy, P7 Article 5 with strong notch, carination on head. The group consensus was *A. coeca*. LACSD reported *A. coeca* in Bight'03 from 868m.

John Byrne, CSD, brought an *Ampelisca* specimen from Bight'08 station 7688, 43m. This station was just west of Ventura. After taking it through the key, despite the fact that it was missing U3, it was decided it was probably *A. pacifica*.

Ron Velarde showed two *Byblis* specimens from B'08 station 7079, 465m. After examination they were determined to be *B. thyabalis*.

More Oedicerotidae FID from Tim Stebbins were next. This time there were 3 specimens from B'08 station 7188. The final consensus was 1 - *Oediceropsis elsula*, 1 - *Bathymedon pumilus*, and 1 - *B.* sp.

Ron Velarde had brought an odd specimen of *Bathymedon pumilus* from B'08 station 7092, 940m. The animal had a conical epistome which is not as described, and the setation of the coaxa was different.

Tim continued providing unusual specimens for examination. First was a specimen of *Photis* sp from B'08 station 7520, 82m. It was determined to be *P. parvidons*.

An oedicerotid specimen was next to be examined. It was collected at B'08 station 7175, 820m. Although provisionally (mis)identified by Tim as "*Monoculodes necopinus*," it was subsequently determined to be *Oediceropsis elsula.*

A deepwater phoxocephalid tentatively identified as *Harpiniopsis* cf. *naiadis* (B'08 station 7173, 670m) was examined and considered similar to *H. epistomata* except for lacking a distinctly produced epistome. Consequently, this animal was given the provisional name of *Harpiniopsis* sp WS1 with Tim expected to prepare a voucher sheet.

Next was a Gammarid FID from the same station. The consensus was for a new genus in the family Hadziidae; one of the characters was U3=rami.

A Phoxocephalid FID from the same station was next. The final ID was *Eobrolegus* ? *chumashi.*

Next another Gammarid FID, this time from B'08 station 6335, 3.9m. It was determined to be *Grandidiella japonica.*

A *Stenothoe valida*, was verified from the same station.

There were some FID Caprellids from B'08 station 7173 which turned out to be *Tritella tenuissima.*

John Byrne brought an unidentified caprellid from B'08 station 7624, 128m. Upon examination it was called *C. mendax*.

Ross Duggan shared an Ischyroceridae from a CSD monitoring station, SBOO I-22, 29m. The specimen was determined to be a *Microjassa* sp, female.

A specimen of *Carpoapsuedes* sp WS1, from B'08 station 7175, 820m was verified.

A *Syrrhoe* sp OC1 from station C5, 310m was also verified.

Photis sp from B'08 stations 7529 and 7566 were examined and determined to be juvenile females. Tim Stebbins offered to reexamine the lots for any *P. parvidons.*

An unusual Pycnogonid FID from B'08 station 7520, 82m turned out to be a *Rhynchothorax phillopsammum*. For more information on this species see the MMS Atlas.

An FID Leuconidae from B'08 station 7168, 860m was brought forth for examination. The final ID was *Leucon (Crymoleucon) bishopi*; it had a denticulate anterior margin and was a male specimen. It was recommended for vouchering.

Lastly a damaged specimen of Munniospidae from B'08 station 7168, 860m was examined and the recommendation was to leave it at Family due to its damaged state.

25 JANUARY 2010, B'08 POLYCHAETA, NHMLAC

The first announcement was that the January 21 Taxonomic Database meeting at SCCWRP had been postponed. All other upcoming meetings are the same as those listed previously with the following exception - the 8 March meeting has been changed from a Polychaete literature review to a B'08 Crustacea meeting. Additionally a May 10 Barcoding taxonomic workshop at LACSD has been scheduled.

It was then announced that the website upgrade was complete and archived newsletters can now be searched.

Tony Phillips, CLAEMD, then had the floor to discuss some Bight'08 Cirratulid specimens. We started with *Cirriformia* sp LA1, which was described as a LACSD B'98 provisional species. It has a distinct ridge progressing from the peristomium through setiger 6 where the tentacular filaments are found. The ridge is wide, like that seen in *Chaetozone bansei* Blake 1996. There is a page posted in the SCAMIT website taxonomic toolbox on this provisional species.

Rick Rowe described a CSD B'98 provisional as *Cirriformia* sp SD1. This was a non-staining species. See Rick's character matrix table in the taxonomic toolbox for more information on this species and his *C.* sp SD2 mentioned below. Tony has found that the most common species found in bays and estuaries matched Rick's provisional, except that it has intense staining on the prostomium and peristomium, with intersegmental bands dorsally and ventrally from setiger 6 through the posterior abdominal segments. Tony had seen this animal in earlier surveys in Marina del Rey and Ballona Lagoon and had labeled them *C* sp. BL1 and BL2. The two forms relate to the start of the tentacular cirri (setigers 3/4 and 6 respectfully), which are most likely growth/size differences. Tony is currently calling this animal *Cirriformia* sp HYP1. The taxonomic toolbox has color drawings of the methyl green staining pattern and other information of both *C.* BL1 and *C.* BL2 posted under their new name *C.* HYP1. In reviewing an earlier email from Leslie (9/25/2000) she described an animal with these same characters and stain pattern in shallow water off the Chevron outfall in Santa Monica Bay. Rick has a provisonal *Cirriformia* sp SD3 Rowe 2005 which appears to match Tony's specimens with tentacular cirri starting on setiger 3. Tony is currently trying to get ahold of Rick's provisionals to try and clarify these differences.

Rick Rowe also described a second B'98 provisional as *C.* sp SD2. This animal has tentacular cirri starting on the third setiger with no obvious staining pattern.

Tony then described a species from the Goleta outfall which he is calling *Cirriformia* sp GOL1. This species has tentacular cirri starting on setiger 8/9. This animal has shown three different and distinct staining patterns. They match up well with Leslie's *Cirriformia* sp B. Tony is waiting to review further specimens from Leslie. The taxonomic toolbox has color drawings of the methyl green staining variability and other information is posted as well.

Tony reports *Eteone spilotus* as common from estuaries in northern Bight samples. He reports *Eteone* sp 11 as common in southern Bight samples.

Cirratulus spectibilis is most common in estuaries. However, up north (Santa Barbara area) *C. dillonensis* is found.

Next, LACSD specimens of *Chone duneri* and *Neoleprea californica* were examined. Leslie stated that *N. californica* will be in another genus based on the work she is conducting with Dr. João Nogueira. *N. japonica* in the MMS is incorrect. The characters do not match those from the syntype in Hutchings 1997. It is an undescribed species.

And lastly, a specimen of *Chone bimacuata* was stained and examined and the ID verified.

8 FEBRUARY 2010, B'08 MOLLUSCA, CSD

The meeting was opened by Secretary Megan Lilly. Upcoming meetings were announced as well as the news that SCUM 2011 will be held January 22 at SCCWRP in Costa Mesa.

The first person to show an unusual specimen was Wendy Enright (CSD). Wendy felt that she had collected 4 specimens of *Lirobittium calenum* at B'08 station 7111, 519m. Normally many of the SCB molluscan taxonomists leave *Lirobittium* ID's at just that, *Lirobittium* sp, as there are many difficulties with the group. Some people present weren't convinced of Wendy's species level identification and it was left that she would peruse the available literature and see if she could confirm, more thoroughly, her identification.

At this point John Ljubenkov wanted to take a quick side-trip into Cndiaria-land and talk about hydroids that are commensal on mollusks. *Lirobittium* are often seen with hydroids growing on their shells. John stated that many of the hydroids seen growing on mollusks are of the genus *Merona* but members of the family Bougainvilliidae are also frequently found, and on *Lirobittium* in particular. At this point Kelvin Barwick (OCSD) showed images that he'd taken showing hydroids and what appear to be brood sacks, on an apparently live *Lirobittium* (Fig 1). The image lead us into a curious life history discussion: Hydroids, obviously don't like or want to be buried under sediment as they need their tentacles in the water column in order to feed. Since *Lirobittium* is often covered with hydroids, many times on all different sides of the shell, what is the life style of this gastropod? It obviously can't be spending much time buried in muddy sediment, as its hydroid population would die off if that were the case. This is a similar conundrum with *Compressidens stearnsii*. Most scaphopods, it is assumed, are at least partially buried in the sediments, but the presence of live hydroids on their shells suggests otherwise.

Kelvin Barwick then showed more images of the various *Lirobittium* species he'd come across during the B'08 project. It was thought that one of his species might be *L. rugatum* and another one possibly *L. fetellum*, but for the sake of the B'08 data, all instances of this gastropod will be left at the ID of *Lirobittium* sp, since getting consistent identification amongst the taxonomists was unlikely. It was suggested that perhaps a SCAMIT meeting just to deal with *Lirobittium* might be in order.

Next Kelvin showed images of a specimen he had called *Crockerella crystalline*. After much head scratching it was decided that since the animal was only 3-4mm long, and a juvenile, it should be left as *Crockerella* sp (juv).

The next animal Kelvin showed generated excitement to all present. It was a *Crenella decussata*, which wouldn't be exciting for many, but for those of us "down south" we usually only see its "look alike" *Solamen columbianum*. The specimen of *Crenella* that Kelvin brought nicely displayed the divarication of the ribs at the midpoint of the margin. Additionally the overall gestalt was different. This animal was collected from B'08 station 7493, 72m. Kelvin offered to photograph the specimen and make the images available.

John Ljubenkov took his turn at show and tell next. He had brought a small, juvenile gastropod that had smooth apical whorls which transitioned to cancellate sculpture. There was some thought that it looked like a *Thais emarginata*, but the depth range was wrong for this species.

Secondly we viewed a *Homalopoma berryi* which was an unusual find. John had also brought a juvenile bivalve which was guessed to possibly be a *Diplodonta*, but it was decided that the specimen needed to be opened and the hinge examined before any further attempts at an ID were made.

Bill Power (LACSD) brought a specimen of *Periploma rosewateri* which set off the second round of excited muttering for the day. This animal was collected at B'08 station 7296, 610m, off Ventura. If the ID does turn out to be correct, this will be a range extension for the species which normally occurs from Newport Oregon to the Farallon Islands.

A large specimen of *Tagelus californicus* was passed around by Kelvin. It was collected at B'08 station 6355, in only 1.2m of water.

John then passed around a nice, large specimen of *Antalis pretiosum* which is not unheard of, but not seen as often as some of the other species of scaphopods.

Megan Lilly passed around a small, beautiful gastropod from B'08 station 7235, 147m, which turned out to be a *Granulina margaritula* based on the lack of spire and the outline of the shell. Also from this same station she showed an unusual gastropod. After much discussion it was decided that it was a Fusininae and Don Cadien went so far as to suggest it belonging to the genus *Harfordia.*

The last discussion of the day involved scaphopods. Kelvin Barwick pointed out some discrepancies between figures in the literature, specifically - Pilsbry H. A. & Sharp B. 1897-1898, Scaphopoda, in Manual of Conchology. Vol. 17. Conchological Section, Academy of Natural Sciences, Philadelphia: 1-280. He was worried about *Polyschides tolmei* and *P.californicus* potentially being misidentified. According to the literature *P. californicus* widens more abruptly than *P. tolmei*. Many people present were concerned that they had been confusing these two species. Bill Power (LACSD) feels confident in the way he's been identifying these species and offered to photograph *P. californicus* (which some agencies don't feel they are sampling) and send the images out. It was discussed that perhaps there needs to be another SCAMIT meeting on scaphopods.

With that we finished our day and realized that there are future SCAMIT mollusk meetings that need to be in the works.

17 FEBRUARY 2010, DNA BARCODING COLLOQUIUM, SCCWRP

Dr. Peter Miller from SCCWRP organized the workshop. There were an estimated 50 attendees with POTW's, academia, NHMLAC, governmental agencies, and private industry represented.

Dr. Miller opened the meeting with an overview of his SCCWRP DNA barcoding projects. The first, working in the Southern California Bight, is on benthic invertebrate barcoding as a potential bioassessment tool. And the second, in collaboration with the Stroud Water Research Center, is on barcoding Southern California freshwater stream invertebrates for developing a bioassessment tool. He provided an overview of the idea for this colloquium and introduced the guest speakers.

Dr. Paul Hebert, Canadian Centre for DNA Barcoding, gave a talk entitled "One Gene – All Life: DNA Barcoding Overview and Progress, and the Marine Barcode of Life Initiative." He presented an overview of the upgrade of technology from Darwin to E. O. Wilson, using microscope improvement as an example. He then discussed the development of new age DNA processing machines a "Kodak processing" type of approach in that upgrading of technology context. For barcoding, the CO1 mitochondrial gene was chosen because it is slow to mutate, not being in the nucleus. The Canadian Centre has undertaken barcoding projects ranging from their backyard (literally) to Costa Rica looking at butterflies and moths. They have been able to genetically detect greater diversity than morphology alone. Several examples of cryptic species complexes were revealed genetically, and then supported by more closely examined distribution data. Dr. Hebert discussed the Barcode Of Life Database (BOLD), an online resource for submittal, storage, and retrieval of DNA barcode information. He then went on to outline the goal of using a barcode "blender approach" to augment morphological taxonomic analysis of freshwater and marine invertebrate samples. Currently, the goal of determining the diversity of a sample is possible, once a library of species for a given area is established. However, the abundance of those species detected cannot yet be determined. Dr. Hebert estimates that it may be 5 years before abundances can be determined. There is a worldwide Marine Barcode of Life Initiative underway. It is in the process of recruiting countries to sign on and provide funding contributions.

Dr. Bernard Sweeney from the Stroud Water Research Center, PA, presented his talk "Water Quality Analysis using Macroinvertebrates with and without DNA Barcoding." White Clay Creek in PA has a 40 yr study history and the species that occur are well known by Stroud taxonomists. The study area has 2 sites that are 2 miles apart. While they are in relatively close proximity to each other there are significant land use differences separating them. There were 3 identification methods compared: amateur level, expert level, and DNA barcoding. Collected samples were processed and preserved in 95% EtOH. They were then analyzed with the three identification methods. There was an improvement in percentage identification level with each subsequent method. The expert taxonomists (20 yr average experience) were in disbelief initially of the greater resolution provided by DNA results. DNA results found two species of chironomid the taxonomists recognized as a single species. When the taxonomists reexamined the DNA discriminated species, they discovered differentiating morphological characters that had been overlooked. This study was not a labor savings over traditional taxonomy. Each of the 1600 specimens were processed individually. They were each identified, individually vialed/labeled, and had a leg pulled and vialed separately for DNA processing. This meticulous specimen handling was necessary to provide the abundance figures for the taxa reported.

Dr. Mehrdad Hajibabaei – Biodiversity Institute of Ontario, presented his talk "Next Generation biodiversity Analysis" remotely from Ontario. He has been developing tools to allow DNA analysis of older museum specimens. These specimens usually produce shorter base pair lengths due to fragmentation of DNA. A new technique called Pyro PCR produces modified sequences that are able to resolve species. The technique is being applied to formalin preserved specimens with promising results. The ability to access the vast resource of formalin preserved material in museum collections would be a huge breakthrough. Dr. Hajibabaei also responsed to a question asking about the challenge of linking abundance to sequence counts.

Dr. Eric Pilgrim of the US EPA Molecular Ecology Branch in Cincinnati, OH presented the next talk "Barcoding Difficulties and Challenges." Dr. Pilgrim tried to answer questions and concerns raised on the SCAMIT list server regarding pseudo genes, Wolbachia infection, inaccurate Genbank archives, and hybrids. He stated that pseudogenes and Wolbachia are not big issues and the sequences can be discriminated. He readily admitted the QA issues with early Genbank submittals. Early submittals were not checked consistently. There are still issues with known inaccuracies that exist and have not been corrected. Discriminating hybrids is more of an issue because the mitochondrial DNA is female linked.

A Question and Answer session produced these two comments from Dr. Hebert. The cost of running a barcode is currently around $10/specimen with hopes to reduce it to $.50/specimen. He predicted that the issue of discriminating abundance from a "blender sample" would be solved in 2 years.

SCAMIT will hold a DNA Barcoding workshop in May to provide training for creating a DNA barcode library of reference specimens. Creating these voucher specimens consists of identifying species using traditional morphology-based taxonomy, collecting images, recording sample collection data, and extracting tissue for DNA barcode analysis. These activities are in support of SCCWRP's barcoding bioassessment tool project. The first step is to build the benthic invertebrate barcode library of species known to occur. Sample collection/preservation methods will be tested and multiple specimens of the same species will be processed comparing different stations, methods, and depths for repeatability of results.

22 FEBRUARY 2010, POLYCHAETA, NHMLAC

President Larry Lovell opened the meeting with the schedule of the upcoming meetings. The next order of business was the upcoming annual SCAMIT officers election. The current officers were nominated via email by Kelvin Barwick, and seconded by Robin Gartman. At this time, nominations are still open, but they will close on March 8.

Leslie Harris then introduced our guest speaker Dr. Sergio Salazar-Vallejo, visiting polychaete researcher from ECOSUR, Quintana Roo, Mexico. He presented his recent work on the polychaete family Flabelligeridae. Sergio provided a handout "New comments about California flabelligerids", with comments on the genera, publication history, new key, and an update to the names found in Hartman's Atlas (1969).

Sergio launched into a historical review of the taxonomy and character states used to define genera of flabelligerids. He has reviewed type and other materials in museum collections, resulting in important revisions to the understanding of the family. He found that a correct understanding of the branchial arrangement was lacking for many described species. As a result, many subsequent authors have resorted to broadly defining genera and lumped species into "super" genera and the taxonomic history of many species is confused.

Here are some details from Sergio's literature review: Hansen (1880) erected *Tryphonia* and defined it on the type of neurosetae (blunt tipped) without consideration of the branchiae. Chamberlin (1919) worked on the Albatross material and presented 5 new genera. Fauchald (1972) presented material from Western Mexico. He presented *Pherusa* as a complex, a super genus. It contained three major divisions A) with 4 pairs of branchiae, B) with many pairs of branchiae (further subdivided by presence of a dorsal shield), and C) branchial numbers and distribution unknown. Spies (1973) looked at anterior ends and illustrated the branchial and palp configuration. Fauchald (1977) presented *Pherusa* and *Piromis* as valid in the super *Pherusa* complex. Sergio then went on to comment on our local fauna and name changes he recommends. His findings are not yet published, so they are not presented herein.

Sergio did provide some insight into his handling of specimens. Many flabelligerids will adhere sediment to their bodies which covers important structures. He uses a vinegar solution (white commercial vinegar mixed 50/50 with 70% EtOH) as a deflocculating agent to dissolve and clean specimens. Place the animal for just a few seconds in the solution, lightly brush it off or swish it back and forth to clean.

The group then broke for lunch and returned to continue our Bight'08 specimen review for the afternoon.

Capitellidae - B'08 station 6549C 4m, Channel Islands Marina. It had a tiny palode, with eyespots present, 13 biannulate thoracic setigers, 10 setigers with capillary noto/neuro setae (long), the last three 3 with hooks, the 1st setiger was complete. Abdominal set wrinkled not obviously biannulate. Setigers 4/5 were possibly damaged. No staining pattern yet known. It was decided to leave the ID at *Decamastus* sp.

Terebellides sp Type D – a specimen provided by LACSD from a deeper water Bight sample. The ID was verified.

Terebellides kobei – another specimen provided by LACSD was determined to be *T.* Type C

There was discussion of *Leitoscoloplos pugettensis* vs *L.* sp A and the issue of start of branchiae. The branchiae can be very small and difficult to see in the early setigers. Mackie (1987) was reviewed for assistance. He had viewed AHF paratypes of *L. pugettensis*. A close inspection of where branchiae begin and comparison with body size (width) is needed. The same problems may apply to *Scoloplos acmeceps* vs *S. acmeceps profundus*.

Terebellides sp – CSD B'08 station 7632, 440m, with long setae, all fragments, most missing branchiae. All agreed that they were interesting specimens, but due to their small size and incomplete condition, we left them at genus.

Aricidea (*Acmira*) sp – Goleta 30m – was determined to be *Aricidea* (*Acmira*) *rubra*.

Proclea sp – CSD B'08 station 7082, 1023m. With crenulations on dorsum, notosetae like *Lanassa/Proclea*. Specimen very damaged, hard to count thoracic setigers. Left at *Proclea* sp due to poor condition.

8 MARCH 2010, B'08 CRUSTACEA, OCSD

President Larry Lovell opened the meeting with his usual SCAMIT announcements covering upcoming meetings of the organization and other meetings of interest. He continued with other business. It is time for the annual election of officers. Today was the deadline for nominations. The floor was opened to additional nominations, none were made and nominations were closed Ballots will be distributed via email March 12th. The deadline for turning in ballots is March 26th.

The meeting continued with discussion on Bight '08 Crustacea led by Dean Pasko. A spreadsheet provided by Don Cadien was distributed. It presented a list of the taxa covered during the other Bight'08 crustacean workshops and what remained to be done.

The first discussion was on *Paradexamine* and *Colomastix*. Both occur in habitats that we generally do not sample, so most of us have no experience with them. Dean was not able to take the specimen(s) at hand any further. They likely represent a species complex, but will remain as *Colomastix* sp WS1. Dean is to prepare a voucher sheet based on existing material, using the character states identified as useful by Sara LeCroy in her revision of the group in the Western Atlantic (LeCroy 2004) (Don Cadien also recommended that people peruse LeCroy 1995 for additional information). It is likely that there are multiple species native to the area, which have been confused due to Barnard's use of *C. pusilla* for all such forms. It is also possible that one or more species have been introduced to the SCB. We can't decide how many we have without full characterization of the existing materials. In the interim (i.e., until a voucher sheet is prepared) we should either leave them as sp, or use *Colomastix* sp CMPLX.

Jim Roney (CLAEMD) asked about *Paradexamine* character states - mouth parts, article 1 of antennae 1, urosome. Dean reported that when comparing *Paradexamine* specimens from different samples and bays, he found variability in the characters of the racker spines, as well as other characters originally used to differentiate *Paradexamine* sp SD1. *Paradexamine* sp SD1 was determined to represent a complex of poorly defined species, likely including invasives.

Dean reviewed several taxa that he reexamined prior to the meeting leaving the IDs at his previous determinations with no need for further review.

Other B'08 species of interest discussed are as follows:

Tritella ? pilimana - determined to be *T. laevis*

Eusirus ? longipes - to be reported as *Eusirus sp*, with Ron Velarde to share notes on how *Eusirus* sp from the SCB differs from *E. longipes*. [This issue still remains to be resolved, although subsequent email exchanges may have addressed it more thoroughly]

Bruzelia cf tuberculata - to be reported as *B. tuberculata.*

Melitidae stands at family level ID.

Harbansus sp – rostrum curved down, carapus with pitting, dorsal and ventral posterior ridges. May be *H. bradmeyersi*. Dean will review. [Subsequent review confirmed *H. bradmeyersi*]

Alienacanthomysis sp WS1 – telson looks different, single specimen, damaged. Decided to leave at genus.

Protohyale longipalpa/frequens – B'08 station 6223, 1.5m, Mission Bay. Discussion of Chapman's key in Light and Smith's; length of maxilliped palp of article 4 shorter/longer than article 3. Not a good couplet. In contrast, Bousfield keys separate taxa to subgenus based upon sexually dimorphic character states (i.e., male and female maxillipedal palp same or different). Chapman's key is for Central California species and does not include Southern California species. It was decided it should be reported as *Protohyale* sp based on inability to consistently apply characters used to distinguish taxa (e.g., length of mxpd palp article 3 vs 4).

Caecianiropsis sp – Tim and Dean examined and found them to be *C.* sp LA2.

Erichsonella cf *crenulata* – determined to be *E. cortezi* Brusca and Wallerstein 1977.

Zeuxo vs *Synaptotanais* – issues differentiating between genera are poorly defined, reliant primarily on relative length of articles of uropods and/or articles of antenna. Variability in these characters, along with relative interpretations absent representatives demonstrating contrasting character states, were determined to be problematic. That said, one specimen of *Synaptotanais* from the Channel Islands was examined and determined to be correctly identified and distinct from *Zeuxo*; however the *Synaptotanais* specimen was over twice the size of comparable bay specimens identified as *Zeuxo* and *Synaptotanais.* Don showed one specimen identified as *Anatanais* based upon the character of the relative lengths of the antenna articles; however, this character is based upon females and male *Anatanais* have not been described. [Subsequent attempts to apply this character to other Bight'08 samples proved difficult] Generic differences need to be established including males. Don was to send emails to Heard, Larson, Bamber, and Dojiri, asking for help with this group. How are these animals handled in other parts of the world?

Cumella sp WS1 – was reviewed again. Determined to be similar to a Hyperion LA Harbor specimen - *Cumella* sp HYP1, which is similar to *C. californica*, except that uropodal endopod is shorter than peduncle. Jim Roney is to prepare a voucher sheet.

Diastylus sp - with teeth on ocular and frontal lobes, similar to *D. pellucida*. B'08 station 7477, 199m. Determined to be a new species with vermiculate surface sculpture on carapace, somewhat like *Diastylus* sp C, but lacking the large post-ocular hump of that taxon, and with the surface sculpture. Specimen brought by Jim Roney. It was given to Ron Velarde for digital imaging.

Ingolfiellidae – new record, no uropods (reduced). In Light and Smith's. B'08 station 7553, 51m, Channel Islands.

Monocorophium (*oaklandense*) *insidiosus* – B'08 station 6213, <5m, Mission Bay. Specimen brought by D. Pasko.

Pinnixa scamit - is now included in *P. occidentalis* CMPLX on Ed 5 listing.

Pagurus sp LA1 – Bight'08 deep water. 2mm specimen gravid, tuberculation different than described species *P. granosimanus*.

Diastylidae – B'08 station 7696, 140m. Thorax only. *Diastylus* or Gynodiastylidae. Male specimen. Brought by Ron Velarde.

Betaeus cf ensenadensis – found at various Bight'08 bay stations. Gaping fingers but shorter than palm, therefore not *B. longidactylus*. Keys to *B. ensenadensis* in the literature; Wicksten, Hendrickx, Word (old SCCWRP), Light and Smith's, but chela does not look right. Specimens are with scaphocerite narrowed distally and therefore not *B. herrimani* either.

Next for review were **NON-Bight 08** specimens:

Allorchestes rickeri – Jim's specimen from Ballona tidal gate wetlands. Article 4 of periopod 5 is as wide as long. See keys in Chapman, Light and Smith, or Bousfield and Hendricks.

Boreosignum sp – specimen was from SD Bay shipyard and not a Bight'08 sample. Dean is to produce a voucher sheet contrasting his specimen, *Boreosignum* sp 1 Pasko 2010, to *Boreosignum* sp LA1 of Cadien.

Diastylus sp LA1 - LACSD survey 0709. In complex with *D.* sp C. Don Cadien offered to edit the key and produce a voucher sheet. 3 males, one female; station 8C, 61m. New taxa.

Lamprops sp D vs *Mesolamprops* – LACSD specimens. Measurements needed to establish female ratios – percent of basis length to the entire limb. Equal or greater than, for *Lamprops*. Equal or less than, for *Mesolamprops*. *Hemilamprops* was also discussed. Presence and number of anterior marginal carapace serrations should be further explored. Dean commented on spines on P2 differences that he recently noticed.

Melita n sp? – Hyperion specimen. Tried Bousfield's (1996) key but there were problems with the key and illustrations matching up with the setation on G2. *Ablutomelita* complex, *Desmomelita* vs *Melita* vs *Quasimelita*. Barnard's (1962) key, original descriptions, were of no help. We had no success taking it through Don's key either. It was decided to call it *M.* sp POLA1. The specimen was from the SAIC work in LA Harbor in 2008, at station LARR3, lower.

16 MARCH 2010, SCAMIT TAXONOMIC DATABASE, SCCWRP

President Larry Lovell opened the meeting with a review of progress on the taxonomic database project. He showed the Visio graphic with the original idea and component parts. The SCAMIT species list was reissued two years ago and is the backbone of the database project. The species list links to a dynamic species page that will show basic taxonomic information, including synonyms, and Bight'03 occurrence data. The taxonomic tools and old newsletters sections of the website have been added to and improved upon this past year and will have links on the dynamic species page.

Katja Seltmann joined us remotely from North Carolina and gave an update on the dynamic species page progress. There was discussion on the levels of security that would be required for login users. Katja also would like feedback from beta testers on the use and design. The database group was asked to spend some time doing that. Cheryl Brantley presented a demo of the LACSD fish ID taxonomic database developed for use in the field. The Miller and Lea volume is the basis for the content including keys and images pulled (with permission) from the text and modified or augmented with digital images of fresh caught specimens. This fish ID tool incorporates many of the use concepts desired of the SCAMIT taxonomic database. Karen Stocks, UCSC, provided a brief report on the literature database project with SDSU. She has not had time to properly review the final product, but will do so by the next meeting. She did state that there were difficulties interacting with the students due to her lack of access to the file share system they were using.

We then discussed the next move to improve the dynamic species page. Additional datasets need to be added for more occurrence data. The other SCCWRP Bight datasets (SCBPP and Bight'98) will be included. POTW's will be approached next for permission to include their long term monitoring data. Additional holders of datasets that might be approached include POLA, POLB,

and NPDES program contract labs. OBIS USA is interested in the occurrence data we will be providing.

A demonstration version of the database is being developed for one taxa group, the aplacophorans. The text, keys, and detailed images produced by Cadien and Barwick for the Bight'03 aplacophorans are being used for this purpose. The images are being input into Morphbank using the spreadsheet method. Kelvin had been working on this with the assistance of Deb Paul at Morphbank. Issues with populating the spreadsheet are being resolved and submittal and upload at Morphbank should occur soon. Cheryl Brantley has a LACSD project on echinoderms that will produce similar information and images that will be an additional demonstration component when it is completed.

We need to identify tools we have already produced (voucher sheets, keys, taxonomic tables) that do not currently already reside on the website and get them submitted for uploading to the website. In addition, we need to get the hundreds of images that have been produced and reside in files on peoples' computers and load them into Morphbank.

Additional components of the database will include a section on BRI and P-codes. A library of P-codes will be accessible in the taxonomic database. Since P-codes are linked to the species list, they will be updated whenever updates are made to the species list. DNA barcode information produced by the SCCWRP Barcode project will be accessible from the website with links to information on the barcode voucher collection that will reside at NHMLAC.

Cheryl then provided an update on the remaining funds received from OCSD. OCSD provided a total of $15,000 to support development of the taxonomic database. We have been very frugal in spending that money. It has gone to support Katja's development efforts and the work of Dean Pentcheff updating and adding content to the website. We have just over $11,000 remaining. Additional funding sources will need to be sought in the future and Federal, State, and other grants, are all being considered.

The Google Groups list server used by the Taxonomic Database Group for the last couple of years is being replaced. A new discussion list server will be established at DreamHost, the SCAMIT website server. Kelvin Barwick will be doing this soon and all members should expect to get an invitation to link up.

The next meeting of this group will be scheduled for sometime in the late summer. Larry will notify everyone using the new list server and establish a date that will accommodate all who plan to attend.

12 APRIL 2010, B'08 POLYCHAETES, CSD

The meeting was a summation of any left over B'08 polychaete FID's as well as review of new polychaete literature. Larry Lovell opened the meeting by announcing that the current suite of SCAMIT Officers had been re-elected for another term. Upcoming meetings are as follows: May 24, 2010 will be the barcoding workshop at the Los Angeles County Sanitation Districts Marine Lab. There will be a presentation by Peter Miller. What participants need to bring are specimens in good condition that can be positively identified to species. The species will then be photo documented and then the DNA work will begin. The individual results of the barcoding will be linked in a database to the original specimen as well as the photo of the animal prior to dissection and/or tissue removal. All animals will be vouchered and then deposited/curated at the LACMNH. A discussion then ensued on the best way to establish work flow in order to incorporate the photo documentation, dissections, DNA analysis, specimen vouchering, etc, into one stream-lined process. Larry will be sending out a spread sheet to participants which will outline what gear needs to be brought by participants and what will be provided. June 14, 2010 will be the second imaging workshop held at the City of San Diego and hosted by Dan Ituarte and Nick haring. Be sure to bring specimens on which to practice your photography skills. The ultimate goal of the imaging workshops is to get people more comfortable with taking digital images of their specimens which can then be uploaded to morphbank and/or linked to SCAMIT's taxonomic database. July 12, 2010 is currently unscheduled. Larry took a moment here to say that in the future there will be a series of meetings to deal with emends to the SCAMIT species list, after new data/species have come in from the B'08 project. Edition 6 of the Species Listing will incorporate these changes. May 7-8, 2010 will be the SCAS meetings at CSULA. SCAMIT will have a table there with the purpose of spreading the word about SCAMIT and possibly garnering a few new members. Cheryl Brantley then briefly took the floor to remind those present that membership dues are due in May. With that the business portion of the meeting concluded and it was on to polychaetes.

Veronica Rodriguez-Villanueva shared images of two specimens from different stations she thought were *Monticellina serratiseta*. One specimen had a distinctive barred dorsal staining pattern which Larry thought was *Monticellina* sp 1 Lovell and Phillips 1995. We went to the taxonomic toolbox at the SCAMIT website, reviewed the voucher sheet for *Monticellina* sp 1, and thought it was a good match. Veronica's next specimen had teeth on the neurosetae that were more distinct and separated and we were not able to fully identify it. Veronica had pictures of other Bight cirratulid specimens that were problematic and not identified. She shared images of a specimen she had tentatively called *Aphelochaeta phillipsi*. She will send out photos to the Bight'08 group for review.

Kathy Langan then shared some interesting Terebellidae she had recently encountered in Bight'08 samples. She had specimens of *Neoleprea californica*, *Scionella japonica*, and *Thelepus hamatus*. Larry had reported *Neoleprea californica* for the first time from the LACSD July 2009 survey. He recommended reviewing the "Remarks" section of *Neoleprea japonica* on page 264 of the MMS Taxonomic Atlas, Volume 7, Chapter 9 Terebellidae for more information on this species.

Ricardo Martinez-Lara then showed everyone his Pentax camera system using fixed lenses with hood adaptors for photography through the eyepiece of the microscope. The advantages of his system are that he can quickly go from dissecting to compound microscope with no set up. Ricardo shared many high quality images he has taken using this system. There is minimal expense (hood adaptors) to converting a regular 35mm camera/lens system to this purpose.

The group then moved into the primary topic of the day, a review of recent papers with name change implications to species listed in Edition 5 of the SCAMIT species list. The following literature list was compiled by Larry Lovell and Leslie Harris. The content of each paper and the implications to name usage of local fauna were reviewed. Some of the literature citations are followed by a comment on their effect on the Ed 5 species list.

Aguado, T.M. and G. San Martin. 2008. Re-description of some enigmatic genera of Syllidae (Phyllodocida: Polychaeta). Journal of the Marine Biological Association of the United Kingdom 88(1): 35-56.

Parexogone brunnea (Hartman 1961) ----- new generic placement for *Exogonella brunnea.*

Brantley, C.A. 2009. A new species of *Poecilochaetus* (Polychaeta: Poecilochaetidae) from coastal waters off Southern California, USA. Zoosymposia 2: 81-89.

Poecilochaetus martini Brantley 2009 ----- formal description of *P.* sp A SCAMIT 2003 §.

Meißner, K. and M. Blank. 2009. *Spiophanes norrisi* sp. nov. (Polychaeta: Spionidae) – a new description from the NE Pacific coast, separated from the *Spiophanes bombyx* complex based on both morphological and genetic studies. Zootaxa 2278: 1-25.

Spiophanes norrisii Meißner and Blank 2009 -----replaces NEP usage of *Spiophanes bombyx* (not Claparede 1870).

Salazar-Vallejo, S. 2007. Revision of *Flabelliderma* Hartman 1969 (Polycheata: Flabelligeridae). Journal of Natural History. 41 (33-36): 2037-2061.

Flabelliderma ockeri Salazar-Vallejo 2007. -----new addition to list.

Flabelliderma papillosa Salizar-Vallejo 2007. -----new addition to list.

San Martin, G. et al 2009. Revision of the genus *Pionosyllis* (Polychaeta: Syllidae: Eusyllinae), with a cladistic analysis, and the description of five new genera and two new species. Journal of the Marine Biological Association of the United Kingdom 89(7): 1455-1498.

Paraehlersia articulata (Kundnov and Harris 1995) in San Martin 2006 ----- new generic placement for *Pionosyllis articulate.*

Opisthodonta uraga (Imajima 1966) ----- new generic placement for *Pionosyllis uraga.*

Tovar-Hernandez, M.A. 2008. Phylogeny of *Chone* Kroyer, 1856 (Polychaeta: Sabellidae) and related genera. Journal of Natural History 42(33): 2193-2226.
This paper removes several species from the genus *Chone* Kroyer 1856 by reestablishing one old genus, *Dialychone* Claparede 1870, and erecting a new one *Paradialychone* Tovar-Hernandez 2008. Complete lists of the new generic divisions are presented below. The species listed in Ed 5 are in **BOLD**.

Chone Kroyer 1856 - Type species: *Chone infundibuliformis* Kroyer 1856
C. aurantiaca (Johnson 1901) – Washington
C. duneri Malmgren 1867 – Spitzbergen – reported from the NEP but not confirmed by Tovar-Hernandez (2007) (see *P. bimaculata* below)

C. gracilis Moore 1906 – Alaska
C. infundibuliformis Kroyer 1856 – Greenland – reported from the NEP but not confirmed by Tovar-Hernandez
***C. magna* Moore 1923) – California**
***C. mollis* (Bush in Moore 1904) – California**
Chone sp Aleutian Islands of Tovar-Hernandez 2007
Dialychone Claparede 1870 (re-established Tovar-Hernandez 2008) - Type species: *Dialychone acustica* Claparede 1870
***D. albocincta* (Banse 1972) – California**
***D. veleronis* (Banse 1972) – California**
Paradialychone Tovar-Hernandez 2008 - Type species: *Chone americana* Day 1973
***P. bimaculata* (Banse and Nichols 1968) – Washington (and CA) – Synonymized with *C. duneri* by Banse 1972 (which accounts for NEP records of that species); re-validated by Tovar-Hernandez 2007, see Ed 5 listing**
***P. ecaudata* (Moore 1923) – California**
***Chone ecaudata* (Moore 1923) fide Banse 1972, Tovar-Hernandez 2008, reestablishes the jr synonmy status of *Chone minuta* Hartman 1944**
***P. eiffelturris* (Tovar-Hernandez 2007) – Panama & California**
***P. paramollis* (Tovar-Hernandez 2007) - California**

Other recent papers of interest to Southern California area polychaete taxonomists are:

Bakken, T. et al 2009. A review of paragnath morphology in Nereididae (Polychaeta). Zoosymposia 2: 305-316.

Blake, J.A. et al 2009. *Capitella teleta*, a new species designation for the opportunistic and experimental *Capitella* sp. I, with a review of the literature for confirmed records. Zoosymposia 2: 25-53.

Blake, J.A. 2009. Redescription of *Capitella capitata* (Fabricius) from West Greenland and designation of a new type (Polychaeta, Capitellidae). Zoosymposia 2: 55-80.

Bleidorn, C. et al 2006. Mitochondrial sequence data expose the putative cosmopolitan polychaete *Scoloplos armiger* (Annelida, Orbiniidae) as a species complex. BMC Evolutionary Biology 6: 47.

Bleidorn, C. et al 2009. On the role of character loss in orbiniid phylogeny (Annelida): Molecules vs. morphology. Molecular Phylogenetics and Evolution 52: 57-69.

Darbyshire, T. and A.S.Y. Mackie 2009. Two new species of *Diplocirrus* (Polychaeta: Flabelligeridae) from the southern Irish Sea and South Africa. Zoosymposia 2: 91-103.

Dean, H.K. and J.A. Blake 2007. *Chaetozone* and *Caulleriella* (Polychaeta: Cirratulidae) from the Pacific Coast of Costa Rica, with description of eight new species. Zootaxa 1451: 41-68.

Dean, H. and J.A. Blake 2009. *Monticellina* (Polychaeta: Cirratulidae) from the Pacific coast of Costa Rica with descriptions of six new species. Zoosymposia 2: 105-126.

Diaz-Castaneda, V. and S. Valenuela-Solano 2009. Polychaete fauna in the vicinity of bluefin tuna sea-cages in Ensenada, Baja California, Mexico. Zoosymposia 2: 505-526.

Doner, S.A. and J.A. Blake 2009. Two new species of *Aphelochaeta* (Polychaeta: Cirratulidae) from deep water off northern Calilfornia. Zoosymposia 2: 127-137.

Jirkov, I.A. 2008. Revision of Anpharetidae (Polychaeta) with modified thoracic notopodia. Invertebrate Zoology 2: 111-132.

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